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Important note about your report

The sole purpose of this report is to present the Land and Groundwater Contamination - Site Investigation report prepared by Jacobs for Prospect Hill International Pty Ltd (Prospect Hill) for the development of an Energy from Waste (EfW) plant at 164 – 200 McManus Road, Lara, Victoria. This report was produced in accordance with and is limited to the scope of services set out in the agreement between Jacobs and Prospect Hill. The scope of services, as described in this report, was developed with Prospect Hill.

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List of Abbreviations

Abbreviation	Description
ABC	Ambient Background Concentrations
ACL	Added Contaminant Limit
ASLP	Australian Standard Leaching Procedure
ASS	Acid Sulfate Soils
CoPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DQIs	Data Quality Indicators
DQOs	Data Quality Objectives
EfW	Energy-from-Waste
EILs	Ecological Investigation Levels
EPA	Environment Protection Authority
ESLs	Ecological Screening Levels
GDEs	Groundwater Dependent Ecosystems
GSV	Geological Survey of Victoria
HILs	Health Investigation Levels
HSLs	Health Screening Levels
IWRG	Industrial Waste Resource Guidelines
Jacobs	Jacobs Group (Australia) Pty Ltd
LOR	Limit of Reporting
LPG	Liquid Petroleum Gas
mbgl	metres below ground level
MQOs	Measurement Quality Objectives
PASS	Potential Acid Sulfate Soils
PIW	Prescribed Industrial Waste
PMCL	Prevention and Management of Contamination of Land
Prospect Hill	Prospect Hill International Pty Ltd
QA/QC	Quality Assurance / Quality Control
SEPP	State Environment Protection Policy
SOPs	Standard Operating Procedures
TDS	Total Dissolved Solids
VVG	Visualizing Victoria's Groundwater
WMIS	Water Measurement Information System

1. Introduction

Jacobs Group (Australia) Pty Ltd (Jacobs) has been engaged by Prospect Hill International Pty Ltd (Prospect Hill), to conduct soil and groundwater investigation at the property located at 164 – 200 McManus Road, Lara, Victoria (herein referred to as the "site"). The location of the site is depicted in **Figure 1.1**.

It is understood that an Energy from Waste (EfW) plant has been proposed at the site, which will utilise conventional reciprocating grate combustion technology to process residual municipal solid waste, as well as supplementary commercial and industrial waste, to generate electrical power. The proposed plant has a design capacity to process 400,000 tonnes of waste per annum, with two lines processing 200,000 tonnes per annum each.

The preliminary design indicates that the construction of the proposed EfW plant would involve the excavation and removal of approximately 178,000 m^3 of sub-surface material, from a maximum anticipated excavation depth of 11 m below ground level (m bgl). A Preliminary (desktop) Site Investigation (PSI) undertaken previously (Jacobs, June 2020) noted that it could not be determined if the site's subsurface material is likely to be impacted by potential contamination from current and/or historical land uses at, or near the site. It could also not be determined if material (of unknown origin) stockpiled along the southern and northern boundary of the site may include chemical contaminants or other wastes.

The PSI recommended field investigations to inform the contamination status of the stockpiled materials to assess its classification for offsite disposal. The proposed investigation is preliminary in its scope, intended to understand whether contamination issues may present future implications for the project. It is understood that the results of this investigation will be used to inform the environmental condition of the site and its suitability for the proposed development. This will include the potential for impacts on the environment or human health, during or post-construction, and potential management requirements during, or post-construction.

1.1 Background

The PSI comprised a review of publicly available historical information and identified potential sources of land and groundwater contamination based on the site's history and land-use, information regarding the surrounding areas, including material stockpiled onsite. The identified potential sources of contamination on and offsite include:

- Onsite;
  - Potential historical use of the site for agricultural use (cropping and grazing); and
  - Stockpiled fill materials, of unknown origin and composition, identified across the majority of the site.
- Offsite;
  - Liquid petroleum gas (LPG) storage and distribution facilities, consisting of aboveground storage tanks and underground pipelines, along the southwest boundary of the site;
  - A transport warehouse and shipping container yard along the eastern boundary of the site;
  - A recycling facility, three agricultural and industrial chemicals manufacturing plants, as well as two prescribed industrial waste (PIW) management facilities, further east or southeast of the site; and
  - A metal galvanising facility southwest of the site.

The PSI concluded that the aforementioned on and offsite contamination sources have the potential to realise material impacts on the project. The PSI further recommended intrusive investigation works be undertaken to assess the potential project risks.

Figure 1.1 Site Location

Prospect Hill EfW Project

Site boundary

IS305100

0 250 500

Meters

DATA SOURCES

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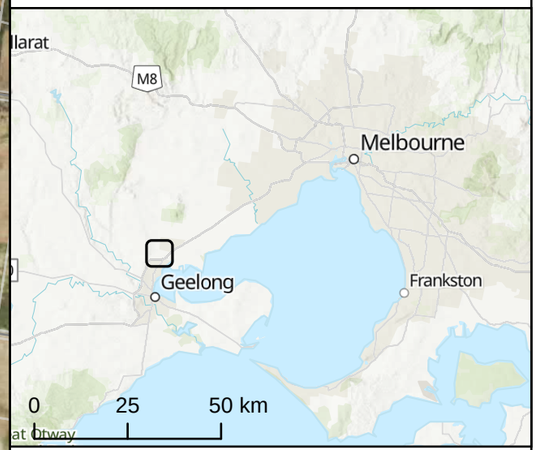

Jacobs

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1.2 Objectives

The overarching objective of this investigation is to reduce uncertainty in relation to the potential project risks, identified during the PSI, as a result of land and groundwater contamination.

The specific objectives of the investigation are to:

- Undertake field investigations to gather and collate environmental data (soil and groundwater) to inform (i) an assessment of the environmental condition of the site, and (ii) the conceptual site model (CSM) in the context of the proposed development;
- Identify potential management requirements and measures that may be required with respect to soil and groundwater contamination during the construction and operation of the proposed development, including preliminary appraisal of aquifer hydraulic conditions which may impact groundwater dewatering; and
- Provide an indication of waste classification implications for offsite disposal of spoil generated during the construction activities. Note it is not intended that this investigation collect sufficient data to confirm waste categorisation of the soils ultimately excavated for disposal.

1.3 Guideline Documents

The following guidance documents have been used in the delivery of this investigation:

- National Environment Protection Council (2013) National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1) (NEPC 2013a);
- Australian Standard AS4482.1-2005, Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds (Standards Australia 2005:1);
- Australian Standard AS4482.2-1999, Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances (Standards Australia 1999:2);
- Australian Standard AS2159 – 2009, Piling - Design and Installation (Standards Australia 2009);
- Australia/New Zealand Standard AS/NZS 5667.11:1998, Water quality- sampling Part 11: Guidance on sampling of groundwaters (Standards Australia 1998);
- Guidelines published by EPA Victoria, including
    - Industrial Waste Resource Guidelines (IWRG) Publication 611.2 - Asbestos Transport and Disposal, 2017 (EPA Victoria 2017:2);
    - IWRG Publication 621 - Soil Hazard Categorisation and Management (2009c);
    - IWRG Publication 701 - Sampling and analysis of waters, wastewaters, soils and wastes (2009c);
    - IWRG Publication 702 - Soil Sampling (2009b);
    - Publication 655.1 - Acid Sulfate soil and rock (2009a);
    - Publication 668, Hydrogeological Assessment (Groundwater Quality) Guidelines (2006);
    - Publication 669, Groundwater Sampling Guidelines (2000);
    - State Environment Protection Policy (SEPP) Prevention and Management of Contamination of Land, (2002) (and its variations); and
    - State Environment Protection Policy (SEPP) - Waters, (2018).
- US EPA (2006) Guidance on Systematic Planning Using the Data Quality Objectives Process;
- ANZECC & ARMCANCZ (2000a), Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australia and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand 2000;

- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian State and Territory Governments, Canberra ACT, Australia;
- Minimum Construction Requirements for Water Bores in Australia (National Uniform Drillers Licensing Committee (Australia) 2020); and
- Relevant Jacobs standard operating procedures (SOPs).

1.4 Scope of Works

The scope of investigation works was informed by the outcomes from the PSI (Jacobs 2020), including information presented in **Section 2** (Site Setting) and **Section 2.6** (Contaminants of Potential Concern). Jacobs conducted the following works onsite as part of this investigation:

- Development of a site-specific health and safety plan;
- Development of Data Quality Objectives for soil and groundwater investigations (**Section 4**) to meet project objectives (**Section 1.2**), and broadly informed by indicated excavation requirements for the development based on the proposed plant layout (refer to *Concept Design Basis Report, IS305100-ME-MEM-0001, Jacobs 2020*).
- Soil investigations including:
  - Excavation of five test pits (TP01 – TP05) across the site for collection of soil samples;
  - Advancement of five soil bores (STP03 – STP07) using a hand auger (extensive fill material was observed in the western portion of the site);
  - Advancement of five soil bores (HA01 – HA05) using a hand auger, across the site for collection of soil samples, (targeting natural soils);
  - Collection of eight soil samples (STP13 – STP20) using a trowel, from the surface of extensive fill material stockpiled in the eastern portion of the site;
  - Collection of seven soil samples (STP01 – STP02 & STP8 – STP12) using a hand auger from the observed soil stockpiles located along the northern and southern boundaries of the site; and
  - Collection of soil samples during drilling of the groundwater monitoring well MW001.
- Groundwater investigations including:
  - Obtaining a bore construction licence from Southern Rural Water for the installation of groundwater monitoring wells;
  - Installation of one groundwater monitoring well (MW001);
  - One round of groundwater gauging and sampling, using low flow sampling method (i.e. Micropurge bladder pump); and
  - Slug testing (for hydraulic conductivity) of one well (MW001);
- Analysis of soil and groundwater samples, including QA/QC samples, at NATA accredited analytical laboratories (ALS and Eurofins);
- Interpretation of the analytical results and comparison against the adopted investigation levels; and
- Preparation of this report.

2. Site Identification

2.1 Site Description

The proposed EfW Plant site is located approximately 14 km north of Geelong, and less than 3 km south of the Lara town centre. The site is bounded by Production Way to the north (currently under construction), McManus Road to the west, with adjacent properties making up the eastern and southern boundaries.

Site location is presented in Figure 1.1, whilst a summary of site information is included in **Table 2.1**.

Table 2.1: Site information summary

Identification	Details
Street Address	164 – 200 McManus Road
Locality	Lara
Local Government Area	City of Greater Geelong
State	Victoria
Legal identity	Lot D and 3, PS710783, property number 356712
Zoning	Industrial 2 Zone (IN2Z)
Planning Overlays	Schedule 18 to Clause 43.02 Design and Development Overlay (DDO18) – Geelong Ring Road Employment Precinct
Current constraints	The site is within a designated bushfire prone area. Potential for land and groundwater contamination-related constraints is examined in this assessment.
Ownership details	Prospect Hill International Pty Ltd
Approximate Area	16 hectares
Current land use	Industrial / commercial
Proposed future land use	Industrial / commercial

2.2 Current Site Conditions

The site is currently vacant of any structures, with much of the surface covered with varying depths of fill material of unknown origin. Further assessment of this material is discussed in **Section 5.3.1**.

The central portion of the site is observed to contain shallower depths of fill material, resulting in a central depression where standing water has collected in several locations.

A deep stormwater drainage swale was observed along the western boundary of the site, running parallel to McManus Road. Defined stockpiles of soil, containing basalt rubble, were identified along the southern and northern boundary of the site.

A comprehensive summary of field observations is included in **Section 5.3**.

2.3 Surrounding Land Use

Broadly, the site is surrounded by a mix of agricultural land, small to medium-scale industrial facilities and low-density rural residential dwellings. The nearest residential developments are the town of Lara (approximately 1.1 km to the north) and the suburb of Corio, Geelong (1.7 km to the south). Bordering land-uses are described in **Table 2.2.**

Table 2.2: Summary of surrounding land-uses

Direction	Surrounding land-use
North	Farmland (plot APS710776)
South	Reserve (plot RES1PS710776); and vacant / undeveloped industrial land (plots S4PS328477 and 3PS328477)
South East	Industrial chemical manufacturing plants (Plots 2PS328477 and 1TP132804). Further southeast, there are two PIW management facilities
East	Rocke Brothers Pty Ltd transport warehouse and shipping container yard consisting of an administrative building, a warehouse, truck parking lots, and a shipping container yard (lot 3PS710783). Further east, there is an agrochemical manufacturer (ACCENSI), a recycling centre (C & D Recycling Pty Ltd) and a fertiliser supply warehouse (Wengfu Australia).
West	Shell LPG Terminal (Lot 2LP38862) consists of administrative buildings, above-ground storage tanks, underground gas pipelines and dams as well as vacant / undeveloped industrial land, which forms most of the western-boundary of the site

2.4 Geology

The Geological Survey of Victoria (GSV) 1:63,360 scale Geelong Geological Map Sheet (1963) indicates that the site is underlain by Quaternary-aged Newer Volcanics (Nv1) which form extensive volcanic plains across the region. Leonard (1979) reported regional thicknesses in excess of 150 m along pre-basaltic drainage lines and around 40 m over the interfluves and thinner towards the Bay.

GSV describes the Newer Volcanics as being vesicular, highly weathered and comprised of iddingsite labradorite basalts, olivine labradorite basalts, and olivine basalts (Ballan type) which are Pliocene to Pleistocene in age. The Newer Volcanics are overlain by varying thickness of fill.

To the north / northeast of the site, the newer volcanics are overlain by Quaternary aged Freshwater Limestones (Q2) consisting of sandy clays and clays with carbonate concretions that outcrop over a wide area near the township of Lara. They also outcrop in the valley of Hovells Creek upstream from the Princes highway.

The expected surface geology the project area is shown in **Figure 2.1**:

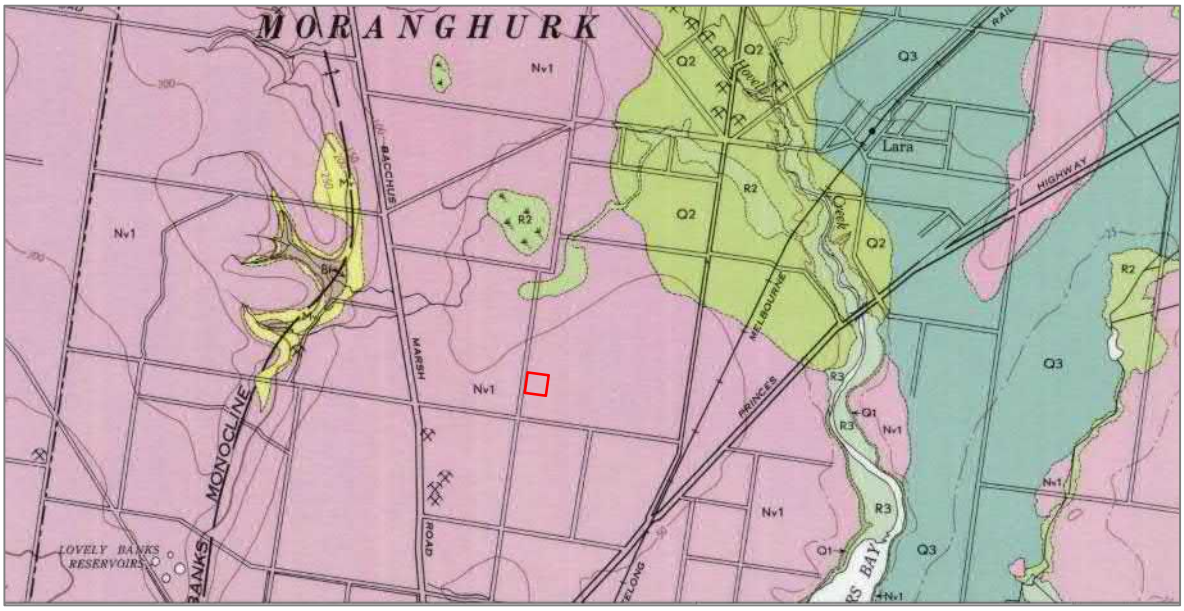


Figure 2.1: Regional Geology with approximate location of the subject site shown in red.

According to the Department of Environment and Primary Industries' Atlas of Acid Sulfate Soils (ASS) (CSIRO 2013), the possibility of encountering acid sulfate soils (ASS) within the site area is extremely low with a 1–5% chance of occurrence in small localised areas. Additionally, the natural soils likely to be present at the site are predominantly derived from basalt which have a low likelihood of ASS.

2.5 Hydrogeology

A review of registered groundwater monitoring well records within a 2km radius of the project area did not identify local depth to water table, and only limited groundwater chemistry data. As such, the sections below primarily consider published information from regional mapping available via the Visualizing Victoria's Groundwater (VVG) portal (Federation University Australia n.d.), the Water Measurement Information System (WMIS) (DELWP 2020) and the Bureau of Meteorology Groundwater Dependent Ecosystems (GDEs) atlas (BoM 2018).

2.5.1 Regional Hydrogeology

The site is underlain by the Newer Volcanics fractured rock aquifer (identified as the Upper Tertiary / Quaternary Basalt Aquifer under the Victorian Aquifer Framework), which forms a major regional aquifer. The unit is mapped as having an approximate thickness between 33 and 35 m across the site. The depth to the shallow water table is mapped to be approximately <5 mbgl across the site, deepening to between 5 and 10 mbgl toward Hovells Creek, east of the site (VVG, 2020). Regional water table mapping further suggests a prevailing groundwater flow direction from west to east/southeast toward Hovells Creek.

The groundwater regime in the Newer Volcanics aquifer is often complex due to the multi-layered nature of the system (Leonard 1979). Similar aquifer systems are expected at the site, consisting of several superimposed basalt flows that are often separated by thin layers of clay and silt with low hydraulic conductivity. Groundwater in fractured rock aquifers typically occurs in fractures, joints, vesicular openings and in the contact zones between flows, as such, hydraulic conductivity can vary from highly permeable (20.2 m/day) to highly impermeable (0.09 m/day), depending on the degree of local fracturing.

Underlaying the Newer Volcanics aquifer is the Brighton Group aquifer which forms a discontinuous sheet-like formation of sand and silt (Leonard 1979). Both the Newer Volcanics and Brighton Group aquifers are underlain

and confined by the Fyansford (Newport) Formation, which forms a low permeability aquitard across the region, with an approximate thickness of 115 m onsite.

2.5.2 Surface Water Receptors

There are no visible natural surface water bodies present at the site. Rainwater falling onto the site is likely to infiltrate into subsurface soils and migrate vertically into groundwater due to the extensive permeable natural surfaces. Surface runoff from the site is likely to be from east to the low-lying areas in the west/ northwest through natural drainage lines. Surface water disperses across the site or drains into municipal stormwater systems along Production Way and McManus Road, which then discharge to Hovells Creek. The creek is the nearest natural watercourse to the site, approximately 2.9 km to the east.

2.5.3 Groundwater Use in the Area

A search of registered boreholes from the WMIS database (DELWP 2020) within a 1 km radius identified 8 registered groundwater bores. An additional 2 state observation bores were identified however, these have been excluded from this assessment. The reported usage of the 8 groundwater bores is as follows:

- One bore – Domestic and Stock use;
- Two bores – Stock use; and
- Five bores – Unknown use.

A further review of registered groundwater bores on VVG indicates that 2 of the 5 bores identified as '*unknown use*' (WRK988694 and WRK988693) are located within the Shell LPG Terminal to the southwest of the site. Table 2.3provides details of the identified bores.

Table 2.3: Registered groundwater-users within 1 km of site

Bore ID	Use type	Distance from Site (m)	Direction
WRK988694	Unknown	373	South West
WRK988693	Unknown	442	South West
81404	Stock	446	North West
WRK988695	Unknown	554	South West
81410	Stock	840	North West
81402	Unknown	872	North West
81411	Unknown	962	North West
WRK989212	Stock & Domestic	984	North West

2.5.4 Groundwater Quality

Groundwater salinity in the area is mapped as ranging between 1,000 to 3,500 mg/L total dissolved solids (TDS). Therefore, groundwater is expected to be classified between Segment A2 and C, as defined by the State Environment Protection Policy (Waters) October 2018.

One groundwater well (MW001) was installed and sampled during this investigation which reported a laboratory measured TDS value of 3,870 mg/L. As such, Segment C has been adopted as applicable groundwater segment for the site. Protected beneficial uses under Segment C are outlined in **Section 3.2.2**.

2.5.5 Site History Review

A comprehensive review of the site history has been detailed in the PSI report (Jacobs 2020). The following presents a summary of the PSI findings:

- Based on aerial photographs from between 1914 to 2019, the site has never been developed and has remained vacant for over a century. It is believed to have been utilised for agricultural purposes (such as grazing) for most of its history;
- Although the site has remained undeveloped, aerial photographs show intermittent disturbance of the ground surface, alternating between grassed and ploughed / excavated surfaces;
- Historical title documents show that from 1855 - 1921 the site was under private ownership, passing between four different proprietors in this time. After which the site was taken over by the Geelong Regional Commission until 1993, when the site became the property of the Greater Geelong City Council. Prior to 1855, the site was Crown Land;
- Prospect Hill International Pty Ltd purchased the land from the Greater Geelong City Council in October 2019; and
- Review of publicly available photographic and documentary information suggests no current or historical potentially contaminating activities onsite. However, some potentially contaminating activities have been identified in the surrounding areas, including liquid petroleum gas (LPG) storage facilities and chemical manufacturing plants.

2.6 Contaminants of Potential Concern

A preliminary conceptual site model (CSM) was developed in the PSI (Jacobs 2020). **Table 2.4** presents a summary of the Contaminants of Potential Concern (CoPC) associated with the potential sources of contamination identified in the PSI.

Table 2.4: Summary of identified CoPC

Site Activity/Use	CoPC	Rationale
On-site		
Fill material of unknown origin and composition	Various contaminants depending on source of materials. Common COPC associated with contaminated fill include metals, TRH, PAH, VOC, asbestos, phenols, OCP, PCB, cyanide and sulphate.	Several stockpiles of fill material spread across the site were identified from aerial and satellite images. The source and composition of the materials is not known.
Historical agricultural-use	OCPs, OPPs, Herbicides (e.g. triazine, atrazine, MCPA, bipyridyls, sulfonyl ureas, chlorophenoxys), nutrients (e.g. nitrates), metals (e.g. Al, As, Cd, Cu, Fe, Pb, Mg, K), insecticides (e.g. DDT, DDE, DDD, bifenthrin), aldrin, dieldrin, toxaphene and *e. coli*	The project site and the surrounding areas have a history of agricultural use, including cropping and grazing. Potential use of broad-acre pesticides, herbicides and fertilisers is an on-site source of contamination.
Off-Site		
LPG storage and distribution facilities	TPH, MAHs (e.g. Benzene, toluene, ethylbenzene & xylenes), metals (e.g. Pb, Zn, Cu, Ni, Cr, Cd, Ba, As, Hg), cyanides, acids (e.g. sulfuric), alkalis, methyl tertiary-butyl ether	The LPG storage and distribution facilities are located less than 50 m from the southwest boundary of the site. Historical aerial photographs show that the facilities have existed since the 1960s. A gas pipeline, located along McManus Rd, directly connects one of the terminals to an oil refinery in Geelong. The presence of underground storage tanks at these properties is unknown.
Transport warehouse and shipping container yard	Potentially contaminated soil and groundwater	The property adjoining the site to the east is a transport warehouse and shipping container yard, developed sometime between 2016 and 2018. The type of goods stored / transported is currently unknown. The property has been added to this list due to its proximity to the site and the uncertainties relating to the nature of its operations.

Site Activity/Use	CoPC	Rationale
ACCENSI Agrochemical manufacturing	Glyphosate, dioxins, OCPs, OPPs, herbicides (e.g. triazine, atrazine, MCPA, bipyridyls, sulfonyl ureas and chlorophenoxys), metals (e.g. As, Hg, Cr, Cu, Zn), chloride, sulfate, ammonium thiocyanate	A crop protection chemicals manufacturer is located approximately 260 m east of the site. The facility produces a wide range of emulsifiable concentrates, suspension concentrates (flowables), powders, aqueous solutions, coated granules and amination-based reactions such as glyphosate and phenoxies. Surface water runoff and groundwater plume migration (during potential dewatering activity during project construction) present potential pathways to the site.
Axieo industrial chemical manufacturing	Solvents (e.g. TCE, toluene oils, acetone, ethyl acetate, etc), polyvinyl acetate, phenols, formaldehyde, phthalate esters, PCBs, phosphates and nitrates, urethane, styrene, metals (e.g. Cd, Cr, Co, Pb, Ti, Zn), MAHs, cresols, chlorinated hydrocarbons, silicate compounds	Axieo is a specialty chemicals manufacturer located approximately 310 m southeast of site. The company website indicates the plant manufactures raw materials for a wide range of industrial chemicals ranging from construction and extractive industries to pharmaceuticals and agriculture. Surface water runoff and groundwater plume migration (during potential dewatering activity during project construction) present potential pathways to the site.
SNF organic polymers manufacturing	Acrylonitrile, acrylamide, sulphur oxides (SOx), nitrogen oxides (NOx), phosphorous, hydrocarbons, VOCs, metals (e.g. aluminium)	This manufacturing facility is located <500 m southeast of the site. A company brochure indicates the plant manufactures organic coagulants and flocculants such as Polyacrylamide (PAM) powders, beads and emulsions as well as super-absorbents (polyacrylate powders) for water treatment and other industries. Surface water runoff and groundwater plume migration (during potential dewatering activity during project construction) present potential pathways to the site.
C&D Recycling	Recycled materials unknown; potential asbestos and metals (e.g. Pb and Zn)	The facility is located approx. 200 m east of the site. Environment Protection Authority (EPA) records show it has been issued at least two Clean Up Notices and one Pollution Abatement Notice.
PIW Management Facilities	Metals (e.g. Hg, Cr and Ag), phosphate, sulphur compounds	Two EPA prescribed waste treatment, disposal and transport facilities are located approximately 797 m southeast of the site. EPA licence documents show that the license holders store, thermally treat and transport / dispose of clinical and related wastes and store photographic and dental amalgam wastes.
Geelong Metal Galvanising	Metals (Al, Cd, Cr, Zn and Pb), solvents, Volatile Organic Compounds (VOCs), chlorinated hydrocarbons, MAHs	The licence holder operates a hot dip steel galvanizing plant, approximately 1.4 km southwest of the Site. This facility has a low potential to impact the project site due to its distance; however, temporary groundwater dewatering activities during site construction could present a transport pathway for impacted groundwater.

Notes: abbreviations used above are as follows – *Total Recoverable Hydrocarbon (TRH); Polyaromatic Hydrocarbon (PAH); Volatile Organic Compound (VOC); Organochlorine Pesticides (OCP); Polychlorinated Biphenyls (PCB); 2-methyl-4-chlorophenoxyacetic acid (MCPA); Dichlorodiphenyltrichloroethane (DDT); Dichlorodiphenyldichloroethylene (DDE); Dichlorodiphenyldichloroethane (DDD); Total Petroleum Hydrocarbons (TPH); Mono Aromatic Hydrocarbon (MAH); Organophosphorus Pesticides (OCP); Trichloroethylene (TCE).*

3. Assessment Criteria

3.1 Soil

The Victorian Government State Environment Protection Policy (SEPP) *Prevention and Management of Contamination of Land*, June 2002 (SEPP PMCL), provides a framework for the maintenance of the quality of the land environment through maximising its beneficial uses to the extent practicable. The SEPP PMCL identifies a range of land use categories and the corresponding beneficial uses to be protected and sets out the environmental quality indicators and objectives for each beneficial use.

Beneficial uses of the land environment required to be protected for specified land uses (defined in Table 1 of the SEPP PMCL), are reproduced in **Table 3.1**.

Table 3.1: Protected beneficial uses of land

Beneficial Uses	Land Use Scenarios						
	Parks & reserves	Agricultural	Sensitive Use		Recreation / Open Space	Commercial	Industrial
			High Density	Other			
Maintenance of ecosystems – natural ecosystems	✔						
Maintenance of ecosystems – modified ecosystems	✔	✔		✔	✔		
Maintenance of ecosystems – highly modified ecosystems		✔	✔	✔	✔	✔	✔
Human health	✔	✔	✔	✔	✔	✔	✔
Buildings and structures	✔	✔	✔	✔	✔	✔	✔
Aesthetics	✔		✔	✔	✔	✔	
Production of food, flora & fibre	✔	✔		✔			

Notes: reproduced from Table 1 of SEPP (June 2002) Prevention and Management of Contamination of Land.
✔ Indicates land use to be protected for the nominated beneficial use.
Shading denotes beneficial uses to be protected applicable to the proposed land use setting. Other beneficial uses have been considered in the context of determining whether the site would be suitable for the beneficial uses of land relevant to a type of development different than the proposed use.

Based on the proposed industrial land use at the site, the following beneficial land uses are considered to require protection:

- Maintenance of Highly Modified Ecosystems;
- Human Health;
- Building & Structures; and
- Aesthetics.

In accordance with the SEPP PMCL, soil quality objectives for the beneficial uses will be primarily sourced from the NEPM (NEPC 2013a), specifically those provided in Schedule B1: *Guideline on Investigation Levels for Soil and Groundwater*. As such, primary reference has been made to the soil quality objectives contained within the NEPM (NEPC 2013b).

Where the NEPM does not specify soil quality objectives for specific analytes, additional national, interstate and international guidelines have been referenced to supplement the NEPM values.

The specific objectives adopted for each protected beneficial use are discussed below.

3.1.1 Maintenance of Ecosystems

The SEPP PMCL states that contamination must not adversely affect the maintenance of relevant ecosystems (i.e. natural, modified and highly modified ecosystems).

In accordance with Section 2.5 of the NEPM (2013b) Schedule B1 *Guideline on Investigation Levels for Soil and Groundwater*, ecological investigation levels (EILs) have been derived for eight common contaminants in soil including arsenic, trivalent chromium, copper, nickel, lead, zinc, dichlorodiphenyltrichloroethane (DDT) and naphthalene. These have been categorised into three generic land use settings for the protection of terrestrial ecosystems, namely:

- Areas of Ecological Significance;
- Urban Residential Areas and Public Open Space; and
- Commercial and Industrial.

In consideration of the proposed commercial / industrial land-use at the site, primary reference has been made to the 'Commercial and Industrial' EILs for the eight common contaminants, as specified in the NEPM (2013).

As part of the assessment at the site, Jacobs has collected representative fill and natural soil samples from the site and submitted for analysis of key soil characteristics (pH, organic carbon content and clay content) to facilitate the derivation of site-specific EILs. Site-specific EILs for a 'Commercial and Industrial' land use setting have been derived by Jacobs for the fill material and natural soil, using the EIL calculation spreadsheet included in the "ASC NEPM Toolbox" for zinc, copper, chromium (III) and nickel, in a low traffic area within Victoria. The derived site-specific EILs, physiochemical data and EIL calculation sheets are presented in **Appendix A**.

With regards to petroleum hydrocarbons including BTEX, TRH and benzo(a)pyrene, reference has been made to the Ecological Screening Levels (ESLs) contained in Table 1B(6) of the NEPM Schedule B1, to assess risk to local ecosystems in the land use scenario 'Commercial and Industrial'.

Where EIL/ESL levels have not been defined in the NEPM (2013) and/or where site-specific EILs for certain inorganic parameters were not derived as part of the assessment process, other criteria have been referenced from the following sources (as appropriate):

- "Commercial" and "Industrial" soil quality guidelines – from Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health.

3.1.2 Human Health

The Health Investigation Levels (HILs) provided in the NEPM (2013) Schedule B1 have been referenced in the first instance, to assess the potential health risk presented by potential soil contamination. The HILs have been derived for a broad range of metals and organic substances for four generic land use settings as follows:

- **HIL A:** Residential with garden/accessible soil (home-grown produce <10% fruit and vegetable intake (no poultry), it also includes childcare day care centres, preschools and primary schools;
- **HIL B:** Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space, such as high-rise buildings and apartments;
- **HIL C:** Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate; and
- **HIL D:** Commercial/Industrial includes premises such as shops, offices, factories and industrial sites.

The NEPM does not designate HILs specifically applicable for short-duration exposures to contaminants in soils (by direct contact, ingestion or inhalation) for construction workers including during intrusive investigations and

excavation works. Jacobs considers HIL C, which assumes a higher exposure duration than HILs D, may be reasonably applied as a Tier 1 screening level for assessing potential health risk to construction workers.

To confirm the applicability of HIL C, Jacobs also applied the methodology for derivation of the HILs as stipulated in the NEPM to determine indicative levels protective of the health of construction workers, for the indicated contaminants of concern. This was based on a set of exposure assumptions considered reasonable for a typical construction work scenario. The derived levels were comparable or higher than the NEPM HIL C for most contaminants, with the exception of beryllium, cadmium, hexavalent chromium, manganese and nickel and potentially benzo(a)pyrene TEQ. However, those chemicals are not identified to be contaminants of potential concern for the site and the reported concentrations are below the derived levels for construction workers. On that basis, application of HIL C for screening purposes for construction workers in this case is supported as a reasonable approach.

Health screening levels (HSLs) have been specified in the NEPM (2013) for select petroleum hydrocarbon compounds, BTEX and naphthalene and are applicable to assessing human health risk via the inhalation of vapours and direct contact with affected soils. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures and apply to different soil types (sand, clay or silt) and depth of contamination (i.e. 0-<1m, 1-<2m, 2- <4m and 4m. Jacobs has adopted the HSL D for commercial and industrial land use setting for screening purposes.

Where no NEPM HIL criteria were available for selected contaminants, guideline values were adopted from the following international publication:

- US EPA (May 2020) Region 9 Regional Screening Levels (RSLs) – Industrial Soil.

3.1.3 Building and Structures

The SEPP PMCL states that "contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials".

The potential for the condition of soils at the site to adversely impact upon buildings may include elevated sulphate and chloride concentrations, or acidic (low pH) soil conditions which are detrimental to some concrete and steel structures.

In order to assess whether the onsite soils may exhibit the above characteristics, reference has been made to Standards Australia (2009) AS2159 Piling - Design and Installation (AS2159-2009).

3.1.4 Aesthetics

There are currently no aesthetic-based criteria for soils. However, the SEPP PMCL states that "*contamination must not cause the land to be offensive to the senses of human beings*". As such, consideration has been given to the following aesthetic condition of the soil environment:

- Discolouration and staining;
- Discernible offensive odours; and
- Presence of waste products (i.e. rubble, metals, plastics, ceramics and other anthropogenic materials).

Soil aesthetics was assessed during the investigation and where present, reported on the field logs.

3.1.5 Acid Sulfate Soil

Acidity in soil can cause durability issues to transportation structures and embankments. Soil acidity can be naturally occurring in the soil environment, including from oxidation of metal sulphides where present in soil. Acidity can also be produced by excavation of soils containing metal sulphides, due to aeration and oxidation of such soils. Therefore, acid sulfate soils and potential acid sulfate soils require management to minimise formation of, and impacts from, acidity. Primary reference has been made to the following guideline to assess the presence of ASS or potential ASS in the project area:

- Environment Protection Authority, Publication 655.1 – Acid Sulfate Soil and Rock, July 2009.

Jacobs has referred to the guidelines in Tables 2 and 3 of EPA Victoria Publication 655.1 to assess the potential presence of AASS or PASS at the site which have been reproduced in the **Tables 3.2 and 3.3.**

Table 3.2: Interpretation of field pH results

pH_F	pH_{FOX}	Δ pH	Reaction Rate	Action Required
≥5	≤5	≥2	1 – 2	If no other field indicators are present, no further action is required.
>4 and <5	>3 and <5	>2	≥2	PASS may be present further assessment is required.
≤4	≤3	>2	≥2	AASS or PASS are likely to be present, further assessment is required.

Notes: Reproduced from Table 2 of EPA Victoria 655.1
pH_F : measure of soil pH of a soil/water paste
pH_{FOX} : measure of soil pH after rapid oxidation with hydrogen peroxide
Δ pH : difference between pH_F and pH_{FOX}

Table 3.3: Texture based action criteria for classification of acid sulfate soil

Soil texture	Approx. clay content (%)	Net acidity criteria (1 - 1,000 tonnes)		Net acidity criteria (>1,000 tonnes)	
		%S (oven dry basis)	mol H+/tonne (oven-dry basis)	%S (oven dry basis)	mol H+/tonne (oven-dry basis)
Sands to sandy loams	<5	0.03	18	0.03	18
Sandy loams to light clays	5 – 40	0.06	36	0.03	18
Medium to heavy clays and silty clays	>40	0.1	62	0.03	18

Note: Reproduced from Table 3 of EPA Victoria 655.1

In the absence of specific information relating to the volumes of soil that will be disturbed during construction, Jacobs has adopted the soil criteria (> 1,000 tonnes) and chosen the most conservative soil type (sands to sandy loams) for the purposes of the assessment. The results from soil samples collected during the field investigation have been assessed against adopted guidelines for acid generation potential.

3.1.6 Off-site Soil Disposal Criteria

EPA Publication IWRG 621 *Soil Hazard Categorisation and Management*, (2009c) designates soil classification limits for soils subject to offsite disposal. As per IWRG 621, waste soil is considered prescribed industrial waste and can be categorised by chemical analysis, using the published hazard categorisation threshold, into the following classifications:

- Fill material;
- Category C;
- Category B; and
- Category A.

According to EPA Publication IWRG 611.2 (2017) *Asbestos Transport and Disposal*, soils contaminated with asbestos should be classified as Category C waste. Soils impacted with asbestos must be packaged as per this guideline and disposed at an EPA licensed waste receiving facility.

3.2 Groundwater

3.2.1 SEPP (Waters)

Reference has been made to the State Environment Protection Policy (Waters) (SEPP (Waters)) to identify the beneficial uses of groundwater that require protection at the site, and the relevant groundwater quality objectives to be adopted for the purposes of assessment.

3.2.2 Beneficial Uses of Groundwater

The SEPP (Waters) requires certain beneficial uses of groundwater to be protected, based on the natural salinity of the groundwater, measured as the concentration of total dissolved solids (TDS mg/L). Beneficial uses are assigned in the SEPP (Waters) according to groundwater segments defined on the basis of groundwater salinity.

The SEPP (Waters) divides groundwater in Victoria into seven segments. These segments, the TDS range and the beneficial uses required to be protected for each groundwater segment are presented in Table 2, Schedule 2 of the SEPP (Waters), and are reproduced in **Table 3.4,** with annotation relating to groundwater conditions at the site.

Table 3.4: Protected beneficial uses of the groundwater environment

Beneficial Uses	Segment (TDS mg/L)						
	A1 (0-600)	A2 (601-1,200)	B (1,201-3,100)	C (3,101-5,400)	D (5,401-7,100)	E (7,101-10,000)	F (>10,001)
Water Dependent Ecosystems & Species	✓	✓	✓	✓	✓	✓	✓
Potable Water Supply – Desirable	✓						
Potable Water Supply – Acceptable		✓					
Potable Mineral Water Supply	✓	✓	✓	✓			
Agriculture & Irrigation (Irrigation)	✓	✓	✓				
Agriculture & Irrigation (Stock Watering)	✓	✓	✓	✓	✓	✓	
Industrial & Commercial	✓	✓	✓	✓	✓		
Water-based Recreation (Primary Contact Recreation)	✓	✓	✓	✓	✓	✓	✓
Traditional Owner Cultural Values	✓	✓	✓	✓	✓	✓	✓
Cultural & Spiritual Values	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓
Geothermal Properties	✓	✓	✓	✓	✓	✓	✓

Notes: table reproduced from Table 2, Schedule 2 of SEPP (Waters), October 2018.
✓ Indicates beneficial uses to be protected applicable to the groundwater segment of the environment.
Shading denotes groundwater segment of the environment relevant to the site. Other beneficial uses have been considered in the context of determining whether groundwater at the site would be suitable for any beneficial use. mg/L = milligrams per litre

Regional groundwater salinity mapping indicates the groundwater salinity in the project area ranges from 1,000 to 3,500 mg/L TDS. However, laboratory analysis of samples collected from the on-site monitoring well MW001 reported a TDS value of 3,870 mg/L. As such, Jacobs has adopted Segment C as the applicable groundwater segments for the site.

Accordingly, the beneficial uses to be protected for Segments C include:

- Water Dependent Ecosystems and Species;
- Potable Mineral Water Supply;
- Agriculture and Irrigation (Stock Watering);
- Industrial and Commercial;
- Water-based Recreation (Primary Contact Recreation);
- Traditional Owners' and Aboriginal Victorians' Cultural Values;
- Cultural and Spiritual Values;
- Buildings and Structures; and
- Geothermal Properties.

3.2.3 Adopted Groundwater Assessment Criteria

The SEPP (Waters) refers to the *Australian Water Quality Guidelines for Fresh and Marine Waters*, published by the Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand (ANZECC and ARMCANZ 2000a). It designates objectives for the protection of groundwater beneficial uses, namely for *Water Dependent Ecosystems and Species*, *Agriculture and Irrigation (Irrigation)* and *Agriculture and Irrigation (Stock Watering)*.

In 2018, the Water Quality Guidelines (ANZG 2018) were released, and which superseded the ANZECC / ARMCANZ guidelines. Default guideline values for aquatic ecosystem protection are provided in the Water Quality Guidelines which have been adopted for the assessment of beneficial use *Water Dependent Ecosystems and Species*.

In the absence of groundwater quality objectives in the Water Quality Guidelines (ANZG 2018) and ANZECC / ARMCANZ (2000) documents, alternative screening criteria have been sourced from national and international documents. Adopted groundwater quality objectives for the protected beneficial uses are detailed in **Table 3.5.**

Table 3.5: Adopted groundwater quality objectives

Protected Beneficial Use	Adopted Guideline Sources
Water Dependent Ecosystems & Species	Based on regional depth to water table mapping, a prevailing groundwater flow in an east / south-easterly direction towards Hovells Creek has been inferred. Hovells Creek is considered to be the closest downgradient surface water body, located 3 km east of the site (at its nearest point) and discharging into Corio Bay. Hovells Creek corresponds to the segment "Central Foothills and Coastal Plains" designated by the SEPP (Waters) as a 'slightly to moderately modified ecosystem'. For this ecosystem, the quality objectives specified in the SEPP (Waters) are the Freshwater 95% level of ecosystem protection. Where high or medium reliability trigger levels are not specified, then the low reliability trigger values published in the Water Quality Objectives (ANZG 2018) have been adopted.
Potable Mineral Water Supply	As the site is not located within or near a recognised mineral water province or mineral water production area, the use of groundwater for potable mineral water supply is considered unlikely. This beneficial use is not considered relevant for the site and is not considered further.
Agriculture & Irrigation (Stock Watering)	For stock watering, primary reference has been made to the trigger values provided in the ANZECC / ARMCANZ (2000) Primary Industries - Livestock Drinking Water Quality. Where no groundwater quality objective is provided in the ANZECC / ARMCANZ (2000) for a specific COPC, reference has been made to the health-based values provided in the NHMRC/ NRMMC (2018) Australian Drinking Water Guidelines (ADWG) 6 (human health and aesthetics), Version 3.5, updated August 2018.
Industrial & Commercial	The SEPP (Waters) states that "*groundwater must not be affected to the extent that industrial or commercial water quality is impacted.*" No generic investigation levels or thresholds for industrial and commercial water quality are provided in ANZECC/ ARMCANZ (2000). As the water quality requirements change substantially across various commercial

Protected Beneficial Use	Adopted Guideline Sources
	and industrial activities and on the basis the quality of water needs to be assessed on a case by case basis, no specific criteria have been adopted for assessing this beneficial use. On this basis, the objectives for Industrial and Commercial have been adopted by the Auditor as default objectives on the assumption that if the objectives for other extractive beneficial uses requiring protection are achieved, then the beneficial use Industrial and Commercial will also be protected.
Water-based Recreation (Primary Contact Recreation)	For *Water-based Recreation (Primary Contact Recreation)*, primary reference has been made to the guideline values provided in the NHMRC/NRMMC (2008) *Guidelines for Managing Risks in Recreational Water; those guidelines adopt primarily the Australian Drinking Water Guidelines (ADWG).* Where aesthetics-based values exist for certain CoPC, they will be used in the first instance if lower than the health-based values (on the premise that if water is too smelly to drink, one would not want to swim in it). Consideration has been given to the following recommendation stipulated in Section 9.3.2 of that NHMRC/NRMMC (2008) guideline: "*Mance et al (1984) suggested that environmental quality standards for chemicals in recreational waters should be based on the assumption that recreational water makes only a relatively minor contribution to intake. They assumed a contribution for swimming of an equivalent to 10% of drinking water consumption. Since most authorities (including WHO) assume consumption of 2 litres of drinking water per day, this would result in an intake of 200 mL/day from recreational contact with water (WHO 2003). This provides for a simple screening approach in which a substance occurring in recreational water at a concentration of 10 times that stipulated in the drinking water guidelines may merit further consideration.*" On that basis, the NHMRC / NRMMC values have been referenced and adopted, and for non-volatile chemicals the value has been adjusted by a factor of 10. Health criteria for volatile chemicals and aesthetic criteria have not been adjusted.
Traditional Owner Cultural Values & Cultural & Spiritual Values	The SEPP (Waters) provides no specific environmental quality indicators or objectives for groundwater used for these beneficial uses. However, the SEPP (Waters) states that "*Environmental quality objectives for other beneficial uses such as water dependent ecosystems and their species go some way to protecting the cultural and spiritual values, including spiritual relationships, sacred sites and customary use.*" On this basis, the objectives for *Water Dependent Ecosystems and Species* have been adopted as default objectives on the assumption that if these objectives are achieved, then the beneficial use *Traditional Owner Cultural Values* and *Cultural and Spiritual Values* will also be protected.
Buildings & Structures	Australian Standard AS2159 (2009) *Piling - Design and Installation* has been referenced for assessing the impact of groundwater on building structures, in particular, corrosive or aggressive effects of groundwater as indicated by pH, sulphate and chloride.
Geothermal Properties	In accordance with the SEPP (Waters), "*For the purposes of geothermal -* *(a) No activity must affect the geothermal properties of groundwater; and* (b) *Specific indicators include temperature between 30 and 70 degree Celsius.* " The proposed use of the site is for commercial and industrial. The abstraction of groundwater for this use is considered unlikely. In addition, based on the low groundwater temperatures (<30 degree Celsius) measured at the onsite groundwater well (MW0001), the use of groundwater for this beneficial use is not considered to be feasible and will not be considered further.

3.2.4 Criteria for Vapour Intrusion

Groundwater HSLs have been specified in the NEPM 2013 for selected petroleum compounds (including BTEX, naphthalene and volatile TRH fractions) and are applicable to assessing potential human health risk via the vapour inhalation exposure pathway. The HSLs are dependent on the specific land use setting of a site and the characteristics of building structures. The Groundwater HSLs apply to different soil types (sand, clay or silt) and depth to source below surface from 2 m to 8+ m bgl. Whilst the HSLs have not been developed for fractured bedrock, the HSLs (sand) have been conservatively adopted by Jacobs as preliminary screening levels for the assessment of potential vapour intrusion risks at the site.

4. Data Quality Objectives

Data quality objectives (DQOs) are qualitative and quantitative statements that define the type, quality and quantity of data required to support defensible risk management decision making. The DQO process is a seven-step iterative process that was developed by the US EPA and is endorsed by the NEPM (NEPC, 2013). The approach for developing the DQOs is outlined in **Table 4.1.**

The following DQOs have been developed for this investigation to systematically establish objectives that can be used to make risk-based decisions and optimise the design of the works.

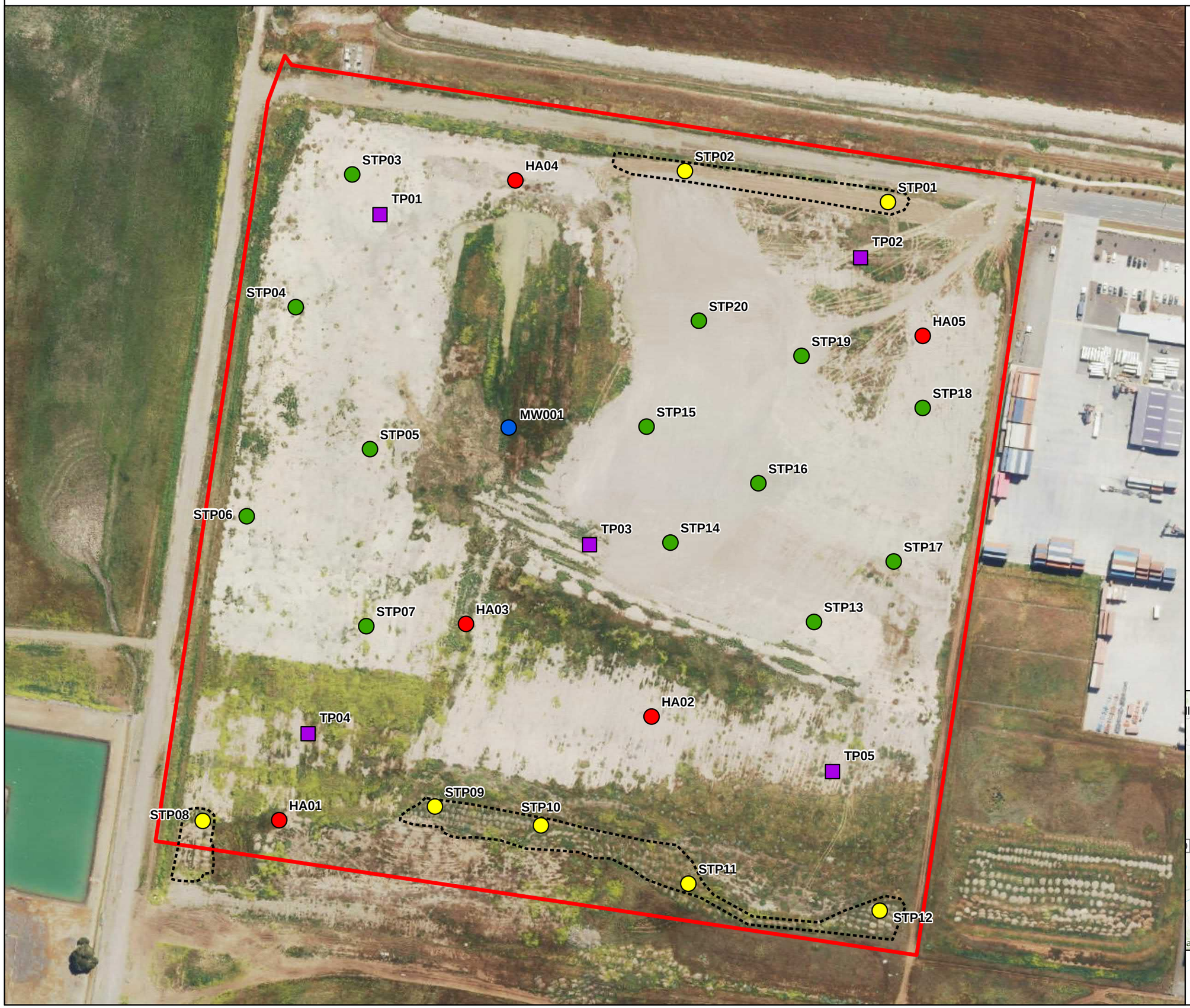
Table 4.1: Data quality objectives for soil and groundwater investigations

Step	Step Description	Details
1	**State the problem:** *Summarise the potential or known problem that will require new environmental data and identify the resources available to resolve the problem.*	The site is believed to have a long history of agricultural use (cropping and grazing) with potential use of broadacre pesticides, herbicides and fertilisers. In addition, fill materials of unknown origin and composition have been identified across the site. Properties in the immediate vicinity of the site are linked to potentially contaminating activities with potential migration pathways, including surface water runoff and groundwater. These potentially contaminating activities may pose impacts to the project, human health and the environment.
2	**Identify the goals of the study:** *State how environmental data will be used in meeting objectives and solving the problem*	The primary goal (overall objective) of the study is to determine whether or not land and groundwater contamination is present at the site as a result of historical land-use, both on- and offsite; and whether any identified contamination issues present project and / or human health and ecological risks. The results of the study will: ▪ Provide environmental data to inform assessment of environmental condition of the site and refine the conceptual site model (CSM); ▪ Options for management measures that may be required to render the site suitable for the proposed development; ▪ An indication of site contamination status i.e. the potential presence / absence of the contamination, considering historical activities and the proposed land use; ▪ Identify potential management requirements and measures that may be required with respect to soil and groundwater contamination during construction and operation of the proposed development, including preliminary appraisal of aquifer hydraulic conditions considering groundwater dewatering; and ▪ Provide an indication of waste classification implications for offsite disposal of spoil generated during construction activities.
3	**Identify information inputs:** *Identify the information needed to support any decision and specify which inputs require new environmental measurement.*	Media: soil and groundwater Environmental parameters: CoPC as summarised in **Table 2.4**. The CoPC were measured in soil and groundwater samples at the complete sampling locations, presented in Figure 4.1.
4	**Define the boundaries of the study:** *Specify the spatial and temporal aspects of the environmental media that the data must represent to support the decision.*	The study is confined within the site boundaries as shown in Figure 1.1 For soil investigation locations, the vertical boundary of the investigation was generally limited to the investigation of fill and underlying natural soil, to a maximum depth of 2 m bgl or refusal on rock. The groundwater bore was drilled to a depth of 10.5 m bgl. The temporal boundary of the study is limited by the data collection effort, complete between 16-25th June 2020.

Step	Step Description	Details
5	**Develop the analytical approach:** *Define the parameter of interest, specify the type of inference, and develop the logic for drawing conclusions from findings*	The key decision rules for the sampling were: • Has the data collected as part of the program met the Data Quality Indicators (see Section 7)? - If yes, then the data can be used to inform our understanding of land and groundwater contamination at the site. - If no, then an assessment of the need to collect additional data will be required. • Has the data collected as part of the program provided sufficient information to identify the presence of land and groundwater contamination, and outline the resulting potential risks to the project? - If yes, then no further sampling is required. - If no, then additional sampling may be required if the sampling methodology is deemed to be useful for the site conditions.
6	**Specify performance/ acceptance criteria:** *Develop performance criteria for new data being collected or acceptable criteria for existing data being considered for use*	This step involves specifying acceptable limits on decision errors. Decision errors are incorrect decisions caused by using data that are not representative of site conditions due to sampling or analytical error (DEC 2006). Decision errors that can occur for the investigation are: a) Collection of samples which overestimate CoPC concentrations on site, resulting in implementation of management actions which are too stringent. The consequence of this error would be corrective actions being undertaken to a degree which is more than necessary. b) Collection of samples which underestimate CoPC, resulting in implementation of management actions which are not stringent enough to manage the real risk. The consequence of this error may be unacceptable impacts to human health and the environment. The more severe consequences are with decision error (b) since the risk of jeopardising human health and/or the environment outweighs the consequences of undertaking management actions that are not necessary. Developing and assessing acceptance criteria for decisions based on confidence levels would require collection of a statistically significant set of samples for each data type. It is noted that the purpose of the investigation is to provide an indication of site conditions only.
7	**Develop the Plan for obtaining data:** *Select the resource-effective sampling and analysis plan that meets the performance criteria*	In order to inform existing site conditions from a contamination perspective, and to inform future construction and operational risks, a preliminary contamination investigation consisting of intrusive soil and groundwater sampling has been undertaken to assess the potential risk posed by contamination sources identified in the PSI. The data collection design was undertaken in general accordance with methodologies outlined in the relevant EPA guidelines. The detailed scope and methodology are outlined in **Sections 0 & 6**.

Figure 4.1 Sample Locations

Prospect Hill EfW Project

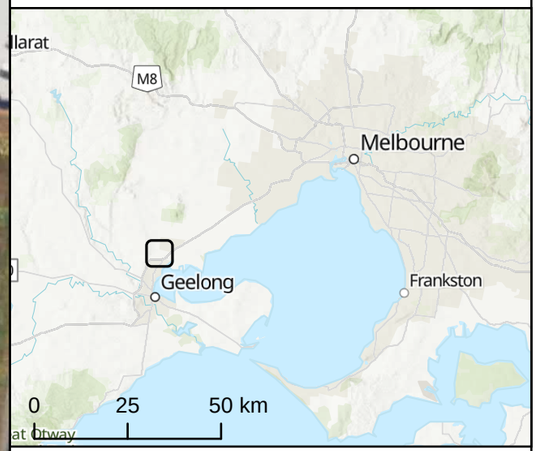


Site boundary
New monitoring bore
Stockpile samples
Hand auger locations
Deep fill samples
Test pit
Stockpile extent

IS305100

0 50 100
Meters

DATA SOURCES
© Commonwealth of Australia (Geoscience Australia) Geodata Topo 250k Series 3; Vicmap Data © State of Victoria; Jacobs.
Imagery: Aerometrex.



Jacobs

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5. Soil Assessment

Between the 16th and 18th June 2020, Jacobs completed the following soil investigations at the site:

- Excavation of five test pits (TP01 – TP05) distributed across the site for collection of soil samples;
- Advancement of five soil bores (STP03 – STP07) using a hand auger, (extensive fill material was observed in the western portion of the site);
- Advancement of five soil bores (HA01 – HA05) using a hand auger, distributed across the site for collection of soil samples, (targeting natural soils);
- Collection of eight soil samples (STP13 – STP20) using a trowel, from the surface of extensive fill material in the eastern portion of the site;
- Collection of seven soil samples (STP01 – STP02 & STP8 – STP12) using a hand auger from the observed soil stockpiles located along the northern and southern boundaries of the site; and
- Collection of soil samples during drilling of the groundwater monitoring well MW001.

A total of thirty-seven soil samples were collected, including thirty-one fill / stockpile samples and six natural soil samples for analysis. In addition, four field duplicate (quality control) samples were collected, see **Section 5.2** for further detail.

5.1 Soil Sampling Methodology

The sampling methodology for the soil investigation is presented in **Table 5.1** Sampling locations are shown in Figure 4.1**.**

Table 5.1: Summary of soil sampling methodology

Method	Detail
General procedures	• Soil encountered was logged in accordance with the Unified Soil Classification System; • Clean disposable nitrile gloves were used for the collection of each soil sample; • Soil samples were collected in clean washed sample jars provided by the laboratory; • Samples were collected at lithology changes and/or where visual or olfactory evidence of contamination was observed; • Soil samples were collected and screened for VOCs with a calibrated photoionization detector (PID). Copies of PID calibration records are provided in **Appendix F;** • Following completion of logging and sampling, the soil bores were reinstated with soil cuttings; • Soil samples collected by Jacobs were transported in a chilled, insulated box, under chain-of-custody (COC) documentation to the primary laboratory (ALS) for selected chemical analyses, inter-laboratory split samples were forwarded onto the secondary laboratory (Eurofins); • Quality control (QC) samples including intra-laboratory blind duplicates, inter-laboratory split samples, equipment rinsate and trip blank samples were collected in accordance with the NEPM and AS4482.1; and • Samples not tested were archived and stored under refrigerated conditions for possible future analysis.
Drilling & Soil Sampling	• Underground services were cleared by a professional underground service locator following review of 'Dial Before you Dig' plans; • Soil bores were advanced to a maximum depth of 10.5 m bgl using a combination of hand auger, direct push tube and air hammer methods; • Grab samples were taken directly from the bucket of the excavator at nominal depths within fill and natural materials at test pit locations; and • Drilling spoil generated from the groundwater monitoring well installations was stored in 200 L drums, which have been disposed to a licensed waste receiving facility, managed by the drilling contractor.
Fill material & Stockpile Sampling	• Deep fill and stockpile sampling were undertaken to a maximum depth of 1.1 m bgl using a hand auger; • Samples were taken directly from trowel or hand auger at nominal depths within fill and natural materials; • Where sampling equipment was used, the decontamination procedure implemented by Jacobs included washing of hand tools with a phosphate free detergent (i.e. Decon 90) and double rinsing with clean tap water and deionized water; and • Spoil generated was reinstated into the bores and compacted before leaving the location.

5.2 Soil Analytical Program

The analytical program was designed to investigate the potential presence of CoPC associated with site historical uses and activities. **Table 5.2** summarises the analytical program implemented during Jacobs soil assessment.

In accordance with Schedule B2 of the NEPM (NEPC, 2013), referencing the WA DER '*Guidelines for the Assessment, Remediation, and Management of Asbestos-Contaminated Sites in Western Australia*' (2009), field screening of 10 L soil samples is required to assess the presence of asbestos within potential contaminated soils. However, due to the agreed scope and objectives of this investigation, these field screening activities were not undertaken. As such, the absence of asbestos from soils on site cannot be determined as part of these works.

Table 5.2: Soil assessment analytical program

Analysis	Fill Samples	Natural Samples	Number of QA/QC samples			Number of samples
			Field duplicate	Trip Blanks	Rinsate Blanks	
Test Pits						**No. samples analysed: 12**
Metals[1], OCP/OPP/PCBs	6	4	2	-	-	12
Cyanide, fluoride, TRHs, PAHs, VOCs, phenols and nutrients [2], soil aggressivity suite [3], and acid sulfate soil suite [4]	4	2	-	-	-	6
Carbamate pesticides, triazine herbicides, phenoxy acid herbicides, synthetic pyrethroids herbicides, toxaphene, *e. coli*, and asbestos identification[5]	3	-	-	-	-	3
Soil physicochemical parameters[6]	3	1	-	-	-	4
Hand Augur locations						**No. samples analysed: 5**
TRH, BTEX, PAH, metals (8)	4	1	-	-	-	5
Monitoring well installation						**No. samples analysed: 2**
Metals[1], TRHs, PAHs, VOCs and phenols	1	1	-	-	-	2
Stockpile / Deep fill samples						**No. samples analysed: 22**
EPA IWRG 621 full suite [7]	6	-	2	-	-	8
Metals[1], cyanide, OCP / PCBS, sulfate, TRHs, PAHs, VOCs, phenols and asbestos[5]	14	-	-	-	-	14
QA/QC						**No. samples analysed: 3**
TRH and BTEXN	-	-	-	1	-	1
Metals (8), TRH, PAH and BTEXN	-	-	-	-	2	2

Notes:
[1] Metal suite includes As, Ag, Be, B, Cd, Cr(VI), Co, Cu, Pb, Mn, Mo, Hg, Ni, Se, Sn and Zn
[2] Nutrient suite includes nitrate, nitrite, ammonia, total nitrogen and phosphorous
[3] Soil aggressivity suite: pH, sulphate and chloride
[4] Acid sulfate soil suite: pH_F, pH_{FOX} and chromium suite
[5] Identification of presence/absence of asbestos in soil per Australian Standard 4964 (2004).
[6] Soil physicochemical parameters: Cation exchange capacity (CEC), pH ($CaCl_2$), total organic carbon and clay content
[7] IWRG 621 full suite includes TRH/ PAH/ Phenols/ organochlorine pesticides (OCP)/ polychlorinated biphenyls (PCB)/ VOC/ Vinyl Chloride / Metals (As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn)/ Cr6+/ CN/ Total Fluoride/ pH

5.3 Field Observations

5.3.1 Generalised Site Soil Profile

Fill material, of varying depths were observed across most of the site, generally consisting of grey to brown-grey, soft silty clay, with varying degrees of medium to coarse basaltic gravels and cobbles. Confirmed fill thicknesses were between 0.2 m and 1.0 m, however at the majority of investigation locations the fill thickness was not

confirmed. The area of deepest fill material observed was the north-western portion of the site where fill was observed at the maximum investigation depth of 2 m bgl, and therefore fill thickness exceeded 2 m thickness. Natural soils were not encountered in this area. On the basis of available data, fill thickness could exceed 2.0 m at other areas of the site as well.

Based on visual observations, the western portion of the site (around locations STP13 – STP20) is expected to have similar depths of fill material present. However, investigation was limited to the top 0.2 m bgl as only sampling of surface soil was proposed in this area of the site. Areas with low surface elevation were observed in the central portion and the south-western edge of the site. Standing water was observed to have accumulated at three locations within the central portion of the site, at the lowest surface elevation of this area.

Based on measured depth to natural soil and visual observations of the site, the depth of fill material across the site has been inferred and is presented in **Figure 5.1**: Inferred extent of fill material. *Note this interpretation of fill material thickness is an approximation only and recognising that fill thickness was not confirmed at the north-western portion of the site, but was observed at the maximum investigation depth of 2 m bgl. Therefore, further intrusive investigations are required to accurately determine the volume and extent of fill material onsite.*

No olfactory or visual indications of contamination were noted within the fill material. Waste observed onsite was limited to inert waste on the site surface, including bicycles, chairs and general rubbish. No potential ACM or building / construction material waste was observed during the field investigation.

Natural soils encountered below fill material were generally consistent across the site, comprising a thin layer of dry brown silt, underlain by stiff red-brown clays, typical of the Newer Volcanics' weathering profile. Where natural soil was encountered at the surface (at HA01 only), dark brown basaltic clay was observed.

Most of the soil investigation locations were terminated after method refusal on the basaltic gravel / cobbles within fill material, however some locations were terminated in natural soils. The underlying basalt varied from fresh (TP02) to extremely weathered (MW001, TP04 & TP05). Observed depth to the top of extremely weathered basalt varied from 1.0 to 1.95 m bgl and is inferred to occur at depths greater than 2.0 m at the north-western area of the site.

The typical stratigraphic profile encountered during intrusive investigations at the site is summarised in the **Table 5.3.**

Table 5.3: Generalised on-site soil profile

Approximate Depth (mbgl)	Description
0 to >2.0 m (depth is varied across site)	Fill material: consisting of grey to brown-grey, soft silty clay, with varying degrees of medium to coarse basaltic gravels and cobbles.
0.4 m to 0.8 m (depth is varied across site)	Natural soil: dry brown silt.
0.55 m to 1.95 m (depth is varied across site)	Natural soil: brown to red-brown basaltic clays.
Depth to top of basalt varied 1.0-1.95 m	Extremely weathered basalt (Newer Volcanics) with interbedded clays.

A copy of the geological logs from the soil assessment is provided in **Appendix A.** The subsurface profile encountered at the site is generally consistent with the published geological information for the local area (refer to **Section 2.4**).

5.3.2 Field Screening

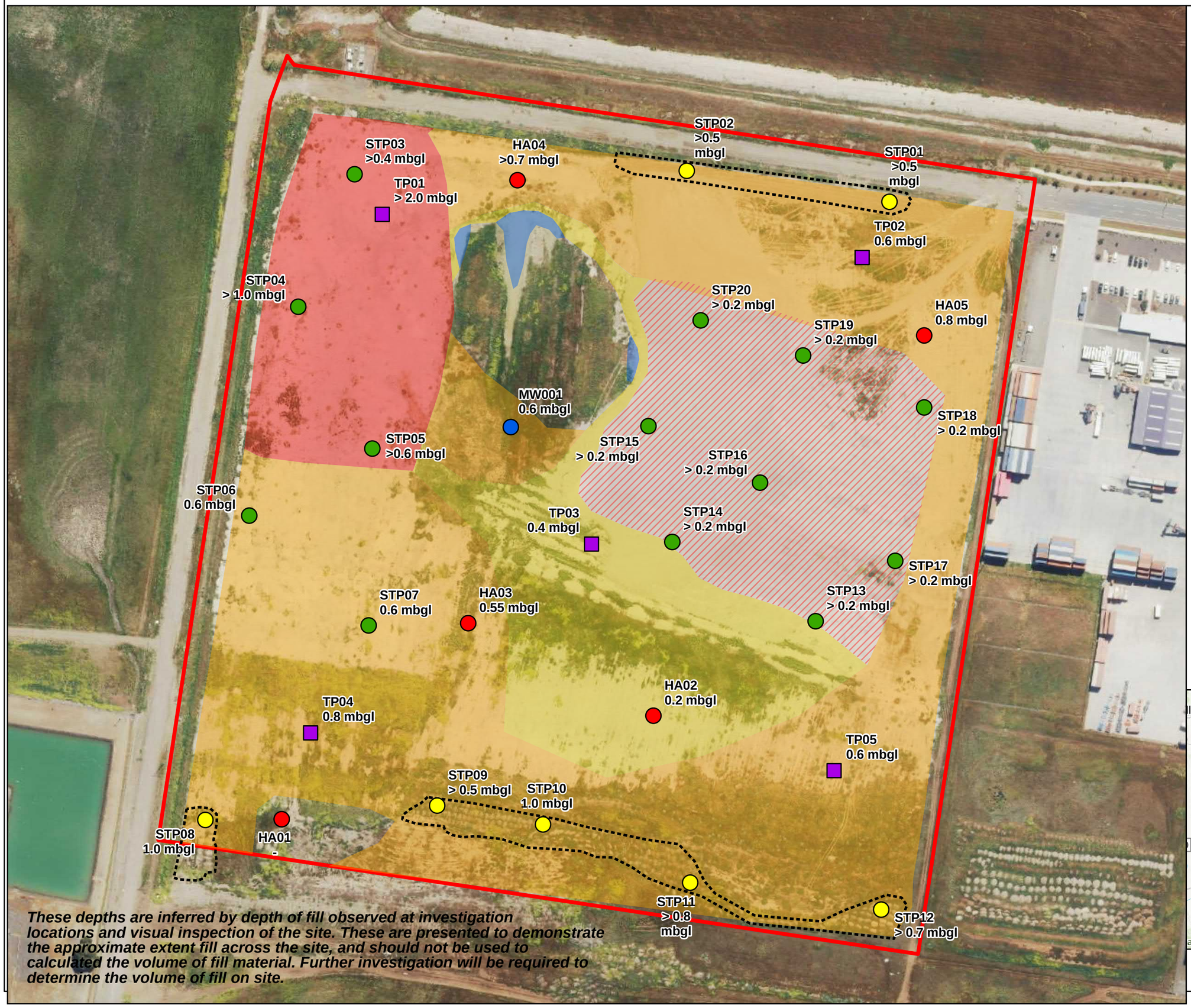
During soil investigation works, soil samples were routinely inspected in the field for the potential presence of visible contamination and potential odours. Soil samples were also screened in the field for potential volatile organic compounds (VOCs) using a photo ionisation detector (PID).

No visual or olfactory signs of contamination were noted and PID readings for all soil screenings were of 0.0 parts per million (ppm).

The PID readings, together with other field observations, are included in the bore logs provided in Appendix A.

Figure 5.1 Inferred extent of fill material

Prospect Hill EfW Project



Site boundary

Stockpile extent

New monitoring bore

Stockpile samples

Hand auger locations

Deep fill samples

Test pit

The depth of fill observed at each investigation location is presented as metres below ground level (mbgl). Where natural soils were not encountered, the depth of fill is noted as greater than the investigation depth (*i.e. "> 0.5 mbgl" means that the investigation location terminated at 0.5 mbgl, however the bottom of the fill material was not observed*).

Inferred Depth of Fill Material

1.0 - >2.0 mbgl

1.0 - >2.0 mbgl#

0.5 - 1.0 mbgl

>0.0 - 0.5 mbgl

Standing water

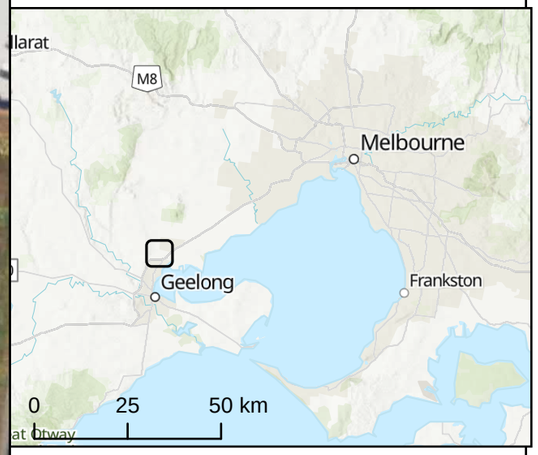
 # - assumed based on visual observations, an elevation difference of approximately 1.5m was observed along the southern and western edges of this area of 'inferred fill depth'.

0 50 100

Meters

DATA SOURCES

© Commonwealth of Australia (Geoscience Australia) Geodata Topo 250k Series 3; Vicmap Data © State of Victoria; Jacobs.
Imagery: Aerometrex.



Jacobs

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Created 06/07/2020 by WardA

5.3.3 Observed Stockpiles

Three defined stockpiles were observed at the site, one each along the northern and southern boundaries, and one in the south-western corner, which sits approximately half on and half off the site. The estimated volumes of these stockpiles are 2,200 m^3, 3,200 m^3 and 500 m^3 respectively. All stockpiles were observed to be of similar material, brown to brown-grey, silty clay with angular basaltic gravels and cobbles.

On 17th June 2020, Jacobs' field scientist inspected and sampled the stockpiles; a total of seven discrete soil samples (STP01-STP02 & STP08-STP12) were collected from various depths. Samples were collected by hand auger; the locations of stockpile samples are presented in Discussion

Australian Laboratory Services (ALS) was selected as the primary laboratory to conduct soil analysis, while Eurofins was used as a secondary Quality Assurance/Quality Control (QA/QC) laboratory. Both ALS and Eurofins are accredited by the National Association of Testing Authorities (NATA) for the analyses undertaken. Laboratory certificates of analyses completed are presented in **Appendix H**.

The results from soil samples collected during the field investigation have been assessed against human and ecological health screening levels (i.e. for consideration of onsite reuse and construction worker protection), waste soil classification (i.e. for consideration of off-site disposal), and exposure classification parameters (i.e. for building material durability).

Soil sample results are presented with adopted assessment levels in Tables 1 to 4 of **Appendix J**. A summary of the soil analytical results reporting contaminant concentration exceedances of the adopted criteria are provided in **Table 5.4**. Results for all analysis undertaken are provided in **Appendix J** and the NATA-endorsed analytical results are provided in **Appendix H**.

Table 5.4: Summary of criteria exceedances in soil samples

Analyte	Conc. Range (mg/kg)	Criteria Exceeded (mg/kg)	Exceedances				
			No. Fill and Stockpile Samples > Criteria	Fill Soil Samples > Criteria *(conc. [mg/kg])*	Stockpile Soil Samples > Criteria *(conc. [mg/kg])*	No. Natural Soil Samples > Criteria	Natural Soil Samples > Criteria *(conc. [mg/kg])*
Nickel	37-126	IWRG 621 – Fill material (60)	23 (≤2 mBGL)	HA02_0.4 *(64)*, HA03_0.45 *(66)*, HA05_0.4 *(98)*, MW001_0.2 *(74)*, STP03_0.4 *(76)*, STP04_0.6 *(85)*, STP05_0.2 *(83)*, STP06_0.6 *(85)*, STP13_0.2 *(61)*, STP14_0.2 *(67)*, STP15_0.2 *(66)*, STP17_0.2 *(63)*, STP18_0.2 *(99)*, STP20_0.2 *(83)*, TP01_0.2 *(76)*, TP01_2.0 *(61)*, TP02_0.2 *(64)*, TP03_0.2 *(68)*.	STP01_0.4 *(73)*, STP09_0.4 *(126)*, STP10_0.6 *(100)*, STP11_0.4 *(94)*, STP12_0.7 *(123)*	2	TP05_0.8 *(63)*, MW001_1.5 *(94)*.

5.3.4 Land Contamination

The analysis program included at least two samples from each borehole, one of which was obtained from the topsoil / fill material and the other sampled from the natural material (if encountered).

- Concentrations of all analytes tested in the soil were either below the laboratory limit of reporting (LOR) or adopted criteria, with the exception of nickel in samples exceeding the IWRG 621 – Fill Material criteria, as summarised in **Table 5.4**;
- ASLP testing conducted for select fill and natural soil samples with the highest nickel concentrations reported, leachable nickel concentrations below the laboratory LOR; and

- Select fill and stockpiles samples submitted for asbestos identification also reported the absence of asbestos. Note no material considered to be potential ACM was observed during the field investigations.

5.3.4.1 Risks to Construction Workers Health

All soil results were below the adopted health investigation levels. Based on the results of this limited investigation, the conditions of soil at the site are indicated as unlikely to pose significant health risks to the construction workers.

The soil sample results are tabulated against the adopted health investigation levels from Table 1 in **Appendix J.**

5.3.4.2 Onsite Reuse / Offsite Disposal of Soil

On excavation, contaminated soils that are removed from a construction site as spoil may be classified as a prescribed industrial waste, the regulation and management of which is governed by the EPA Victoria Industrial Waste Resource Guidelines (IWRGs). The results of the soil samples were compared to the EPA's IWRG for categorisation of spoil considered for disposal:

- Victoria EPA, 2009. *Soil Hazard Categorisation and Management*, IWRG Publication 621

The IWRG 621 thresholds for 'Fill Material" were exceeded in 23 of 31 fill / stockpile samples and 2 of 6 natural soil samples. All of the above samples reported nickel at concentrations that would classify these samples as Category C contaminated soil. However, the nickel concentrations, in both natural soil and the fill/stockpile samples, are considered likely reflect the naturally occurring concentrations; and accordingly those soils could be classified as 'Fill Material' for off-site disposal. In addition, the ASLP testing reported leachable nickel concentrations below the laboratory LOR. The results are tabulated against the IWRG thresholds in Table 2 in **Appendix J.**

The available data is not sufficient to confirm categorisation of the soils for disposal. Additional samples are required to confirm classification of soil per Victoria EPA IWRG publication 702, *Soil Sampling* (IWRG 702, 2009). The number of samples required for adequate classification of soil is dependent on the volume of like-materials generated from construction activities, the estimated standard deviation of contaminant concentrations, and the estimated average concentration. However, as a general rule for homogenous stockpiled soil, up to one sample per every 25 m^3 should be taken, or up to one sample every 250 m^3 for larger excavation volumes where statistical analysis of data is an appropriate approach. In addition, leachability testing should be conducted to supplement the hazard categorisation of spoil for offsite disposal.

All soil results were below the adopted health and ecological guideline values for low density residential and commercial and industrial land use. Based on the limited data, spoil generated from the construction activities may be suitable for reuse on site. However, further assessment is required to fully characterise the soil condition across the site. It is also recommended that the analytical suite for hazard categorisation of the spoil during construction be extended to consider criteria for the protection of human health, to confirm management requirements (if any) for worker health and suitability of spoil for reuse.

5.3.5 Acid Sulfate Soils

Representative fill and natural samples were collected from the three test pits (TP01, TP03, TP05) to evaluate the potential for acid sulfate soils (ASS). The results are tabulated in Table 3a and 3b in **Appendix J** and are summarised in **Table 5.5** with regards to potential ASS.

Table 5.5: Summary of acid sulfate soil suite testing results

Parameter	Range	Comment
pH (pH_F)	7.8 – 9.9	Potential ASS is present if pH_{FOX} >3 and <5, pH_F >4 and <5, the reaction rate is ⩾2, and ΔpH > 2 as designated in EPA publication 655.1 Table 2.

Parameter	Range	Comment
pH peroxide (pH_{FOX})	4.7 – 10.0	▪ All tested samples had a pH_F >5 indicating that the soils are not currently acidic. ▪ All tested samples had a reaction rate greater than 2, indicating the potential to contain sulfides. ▪ All samples except one had a pH_{FOX} greater than 5, indicating a low likelihood of becoming acidic upon oxidation. ▪ TP05_0.8 (natural material) was reported to have a pH_{FOX} of 4.7, indicating the potential to become acidic upon oxidation. As a precautionary measure, all samples were also analysed using the chromium-reducible sulfur (CRS) suite to further inform ASS status by quantifying all forms of acidity.
Reaction rate	3 – 4	
Δ pH	0.3 – 3.1	
Net Acidity	<10 – 16 mol H+/t <0.02 – 0.02 %S	▪ The net acidity in five of the six samples was below the limit of reporting. ▪ The net acidity in the remaining sample (TP05_0.8) was below the threshold for classification as ASS in sands to loamy sands (18 mol H+/t, 0.03 %S).

The soil data in **Table 5.5** indicates that acidification during disturbance is unlikely to occur. This data however is not sufficient to confirm actual management requirements for acid sulfate soils or potential acid sulfate soils; overall the limited data suggest that acid soils are not likely to be encountered during excavation works.

5.3.6 Soil Aggressivity

Six samples were collected from the fill material and natural soils encountered at three test pit locations. Although there are no comprehensive guidelines in Australia to enable assessment of the impact of chemically aggressive soil on concrete and steel, the following documentation is often referred to:

- Standards Australia, 2009. AS 2159-2009: Piling - Design and Installation (AS 2159-2009)

This guideline includes exposure classification criteria for aggressivity to steel and concrete, based on sulfate, chloride and pH. The results are tabulated in **Appendix J** Table 1 and are summarised in **Table 5.6** with regards to soil aggressivity for concrete and steel (AS 2159-2009).

Table 5.6: Summary of site soil data considering chemical aggressivity

Parameter	Range	Comment
pH	7.5 – 9.8	Corresponds to exposure classification of "Non-aggressive" (> 5 pH units), for steel piles in soil, as per Table 6.5.2C of AS2159-2009:
Chloride concentration	500 – 1,600 mg/kg	Reported chloride concentrations were below the exposure classification for steel piles in soil range of "Non-aggressive" (<5,000 ppm in soil), as per Table 6.5.2C of AS2159-2009.
Sulfate concentration (as SO_4)	60 - 590 mg/kg	Reported sulfate concentrations were below the exposure classification for concrete piles in soil range of "Non-aggressive" (<5,000 ppm in soil), as per Table 6.4.2C of AS2159-2009.

All six soil samples contained sulfate and chloride concentrations less than 5,000 mg/kg, and a pH greater than 5, corresponding to classification as non-aggressive to concrete and steel per AS2159-2009.

6. Groundwater Assessment

6.1 Monitoring Well Installation

One groundwater monitoring wells (MW001) were installed at the site by licenced drillers in accordance with *Minimum Construction Requirements for Water Bores in Australia* (2020) published by the National Water Commission. The location of the groundwater monitoring well is provided in **Figure 4.1** and a summary of the monitoring well construction details is provided in **Table 6.1**.

Table 6.1: Groundwater monitoring well network

Well ID	Date Installed	Approximate Well Depth	Well Screened Interval	Screened Lithology	Rationale
MW001	18/06/2020	10.4 m bgl	3.9 – 10.4 m bgl	Weathered basalt (inferred Newer Volcanics)	To assess groundwater contamination and investigate potential recharge in the area of a proposed deep excavation

6.2 Groundwater Assessment Methodology

The groundwater scope and methodology undertaken during the site investigation are presented in **Table 6.2**.

Table 6.2: Groundwater investigation methodology

Task	Methodology
Groundwater Monitoring Well Installation & Development	▪ Prior to drilling, Bore Construction Licence (BCL WLE078564) was obtained from Southern Rural Water for the construction of the groundwater monitoring well. A copy of the BCL is provided in **Appendix G** of this report; ▪ Investigation location as cleared for underground services prior to drilling using a professional locator; ▪ Bore for the groundwater monitoring well was progressed using a combination of hand auger, solid auger and air hammer techniques to a maximum depth of 10.5 m bgl; ▪ The well was constructed using 50 mm diameter Class 18 slotted PVC. The groundwater monitoring well construction log is presented in **Appendix A** to this report; ▪ The monitoring wells were developed using a foot valve immediately following construction to remove fine sediment and to maximise hydraulic connection with the formation. At least three bore volumes of water were removed from the well during well development. The well development records are provided in **Appendix C**; and ▪ The groundwater monitoring wells was allowed to settle for a minimum recommended period of seven days to allow the monitoring well to hydraulically and chemically stabilise prior to sampling.
Groundwater Monitoring Well Sampling	▪ An electronic interface meter was used to gauge the depth to water in each well and to assess for the potential presence of non-aqueous phase liquid (NAPL); ▪ Clean, new tubing was used during the monitoring well sampling event; ▪ Prior to sampling, wells were purged to remove stagnant water and to enable collection of a sample which is representative of formation water. Wells were purged using low-flow sampling techniques (i.e. Micropurge bladder pump) until the stabilisation of the field parameters as follows: - ± 10% for dissolved oxygen; - ± 10% turbidity; - ± 3% for electrical conductivity; - ± 0.05 for pH; and - ± 10 mv for redox potential. ▪ Groundwater samples were collected using low flow method (i.e. Micropurge bladder pump) once the field parameters had stabilised. Drawdown during sampling was maintained at <10 cm. Groundwater sampling records are provided as **Appendix C**; ▪ New, clean, disposable nitrile gloves were used for the collection of each sample;

Task	Methodology
	▪ Calibration Certificates of the groundwater sampling equipment are provided in Appendix F; ▪ Groundwater samples were collected in clean laboratory-provided sampling containers and immediately placed on ice for storage and transport; ▪ Groundwater samples for dissolved metal analysis were filtered in the field using a disposable 0.45 micron filter; ▪ Where sampling equipment was used, the decontamination procedure implemented by Jacobs included washing of hand tools with a phosphate free detergent (i.e. Decon 90) and double rinsing with clean tap water and deionized water; ▪ Field quality control samples were collected to ensure that results were not biased by field sampling techniques or laboratory methods; ▪ Laboratory samples were transported to ALS under COC documentation for selected chemical analyses. An inter laboratory duplicate sample was analysed by Eurofins. Both facilities are NATA-accredited; and ▪ Purged water generated from the groundwater development and sampling works was stored in a 200 L closed-top drums, which has been disposed of to a licensed waste receiving facility, managed by the drilling contractors.

6.3 Groundwater Analytical Program

The analytical program was designed to investigate the potential presence of CoPC associated with site historical uses. The groundwater samples collected during the site investigation were analysed for the CoPC outlined in **Table 6.3**.

Table 6.3: Groundwater analytical program

Date	Well Sampled	Methodology	Sample Filtering	Analyses
25/06/2020	MW001	Low flow sampling technique	Samples for metals analysis were field filtered to 0.45 µm	Solvents suite[1], metals suite[2], nutrients suite[3], VOCs, MAHs, TRHs, PAHs, phenols, OCP, OPP, PCB, formaldehyde, acrylamide, phthalate esters, carbamate pesticides, triazine herbicides, phenoxy acid herbicides, synthetic pyrethroids herbicides, toxaphene, glyphosate, methyl t-butyl ether (trace analysis), cyanide (free and total) and *e.coli*. Groundwater aggressivity suite[4], Major ions[5] and TDS.

Notes:
[1] Solvents suite includes butyl acetate, ethyl acetate, 1-Heptane, cyclopentene, cyclohexane
[2] Metals suite includes Al, As, Ba, Be, B, Cd, Cr(VI), Co, Cu, Pb, Mn, Hg, Ni, Se and Zn
[3] Nutrient suite includes nitrate, nitrite, ammonia, total nitrogen and phosphorous
[4] Groundwater aggressivity suite includes pH, sulphate and chloride
[5] Major ions suite includes chloride, sulphate, alkalinity, fluoride, sodium, potassium, calcium, magnesium and hardness.

6.4 Groundwater Field Results

One gauging event has been completed at the site on 25 June 2020. Details of the gauging events and the measured field parameters are provided in **Table 6.4**. A copy of the groundwater gauging and sampling sheets is provided in **Appendix C**.

Table 6.4: Groundwater field measurements

Well ID	Gauging Date	SWL (m BTOC)	SWL (m bgl)	Dissolved Oxygen (mg/L)	Temp (°C)	pH	EC (µS/cm)	Oxidation Reduction Potential (Ag/AgCl) (mV)
MW001	25/06/2020	9.52	8.75	6.51	15.9	6.67	5,886	85.4

Note: SWL – Standing water level; m BTOC – metres below top of casing

6.4.1 Aquifer Hydraulic Testing

Aquifer hydraulic testing in the form of slug tests were carried out in order to determine the hydraulic conductivity of the screened aquifer material at MW001. Falling and rising head tests were conducted using a solid calibrated three-part PVC slug, 36 mm in diameter and 1.96 m in length. However, due to the groundwater level and the depth of the bore, the slug could only be partially submerged (around 1.5 m). The change in water level was measured using an electronic Solinst level logger set to record every 0.125 seconds and a dip meter for manual measurements. Rapid recovery within two to five seconds and an underdamped response was observed (in highly permeable aquifers, the abrupt pressure change in the test well may result in oscillations of the water level about the equilibrium level; these slug-tests are generally referred to as "underdamped" and the oscillations are caused by the inertia of the water column).

Slug test analysis was completed using Aqtesolv Pro 4.0 software to fit theoretical type curves to observed data in order to understand aquifer properties. The aquifer and bore setup data for the Aqtesolv analysis are provided in **Table 6.5**. The falling head test was analysed in preference to the rising head test as a better instantaneous displacement was achieved in the falling head tests. The curve matching graphs are shown in **Appendix I.**

Table 6.5: Slug test model input information and hydraulic conductivity results

Input parameter	Symbol	Unit	MW001
Static water column height	H	m	1.7
Saturated thickness of aquifer	b	m	Based on an assumed 15 m thickness of Newer Volcanics basalt
K anisotropy ratio	Kv/Kh	-	0.10
Depth to top of screen	d	m	Standing water level within screen, d = 0m
Length of well screen (saturated)	L	m	1.7
Borehole radius	-	m	0.045
Casing radius	r(w)	m	0.025
Representative hydraulic conductivity	K	m/day	10

The derived hydraulic conductivity from MW001 is greater than 10 m/day. This falls within the upper range expected for the Newer Volcanics basalt and indicates that there are high permeabilities at the site. The bore log for MW001 indicates that there was no sample recovery between 8.6 and 9 m bgl which could indicate the presence of significant fracturing and could explain the high result. The analytical solutions for the slug tests suggest a higher hydraulic conductivity, in the order of 50 to 1,000 m/day, rather than the estimate provided above (10 m/day). These values are likely to be an over estimate due to limitations associated with the slug test method. This includes a small volume of the aquifer tested, minimal water level displacement due to the volume of water in the bore, very few data points to fit the solutions due to the rapid response of the aquifer and a large portion of unsaturated gravel pack.

Based on the findings of the investigation, and Jacobs' understanding of the proposed development current at the time of reporting, groundwater is likely to be encountered during construction of the EfW plant, which has an anticipated excavation depth of 11 m bgl. The anticipated groundwater head above the base of the proposed excavation is 2.25 m (using MW001 monitoring data in June 2020). Hence an approach to manage groundwater inflows during construction will need to be developed.

The hydraulic conductivity of the Newer Volcanics aquifer is known to be highly variable, owing to the nature of the fractured rock system. Any construction inflow calculations undertaken at this stage should consider the wider dataset of hydraulic conductivity available to the Newer Volcanics rather than just the single test result from this investigation. However, this analysis should also consider the scenario/possibility that the high permeability result at MW2001 is representative of conditions across the site. Collection of further hydraulic conductivity estimates through testing at additional site locations would inform the current uncertainty around potential inflows.

6.5 Groundwater Analytical Results

6.5.1 Exceedances of Groundwater Beneficial Use Criteria

Table 6.6: Summary of groundwater contaminant exceedances

Analyte Group	Analyte	Conc. (µg/L)	Beneficial Use Criteria Exceeded**			
			WDES[1]	WR[2]	SW[3]	B&S[4]
Metals	Boron	1,500	370	40,000	5,000	-
	Chromium (hexavalent)	10	1	0.5	-	-
	Copper	4	1.4	1,000	1,000	-
	Nickel	16	11	200	1,000	-
	Silver	3	0.05	1,000	-	-
	Zinc	34	8	3,000	20,000	-
Inorganics	Chloride	1,680,000	-	250,000	-	1,000,000
	Nitrogen (total) as N	11,300	1,100 [5]	-	-	-
	Sodium	1,240,000	-	180,000	-	-
	Total Dissolved Solids	3,870,000	-	600,000	-	-

Notes: All values in µg/L, shading indicates exceedance of adopted beneficial use criteria.

** WDES – Water Dependent Ecosystems and Species, SW - Agriculture and Irrigation (Stock Watering), WR – Water-based Recreation, B&S – Buildings and Structures.

Dash (-) = no criteria available / adopted.

1) ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality – 95% protection trigger value for fresh water species. Low reliability trigger value was adopted (where available) in the absence of 95% LOP criteria.
2) NHMRC (2008) Guidelines for Managing Risk in Recreational Water.
3) ANZECC/ARMCANZ (2000) National Water Quality Management Strategy. Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Livestock Drinking Water Quality.
4) AS2159-2009 Protection of Concrete and Steel Piles.
5) SEPP (2018) Guideline values

In summary, concentrations of select metals (boron, hexavalent chromium, copper, nickel, silver and zinc), chloride, total nitrogen (as N), sodium and TDS were reported in excess of one or more adopted beneficial use criterion in groundwater beneath the site. Discussion relating to the groundwater contaminants reported in relation to the relevant beneficial uses is provided in the following sections.

6.5.1.1 Metals

Groundwater concentration of boron, hexavalent chromium, copper, nickel, silver and zinc were reported to exceed the adopted criteria for Water Dependent Ecosystems and Species.

Groundwater concentration of hexavalent chromium were reported to exceed the adopted criterion for Water-based recreation (Primary Contact Recreation).

The PSI did not identify the potential for the historical site activities to result in significant metals contamination at the site. In addition, concentrations of boron, hexavalent chromium, copper, nickel, silver and zinc in site soils were reported to be less than the adopted soil criteria or laboratory LOR. This does not indicate that onsite soils are likely to be a source of dissolved phase metal impacts to the site. The elevated boron, copper, nickel, silver, and zinc concentrations recorded are considered to be representative of background concentrations and are not considered pollution.

Elevated hexavalent chromium in site groundwater may be representative of regional groundwater contamination. However, it is recognised that the exceedance of hexavalent chromium was reported at the laboratory limit of reporting (10 µg/L). Given that, and that only one round of groundwater data is available, confidence that this detection is representative of site groundwater conditions could be questioned. Further

assessment is recommended to confirm the presence of hexavalent chromium pollution in groundwater underlying the site.

6.5.1.2 Nitrogen Species

Groundwater concentrations of total nitrogen (as N) were reported to exceed the adopted criterion for Water Dependent Ecosystems and Species.

All nitrogen species were either below the laboratory LOR or the adopted health investigation criteria, indicating significant contamination of nitrogen species is not expected at the site. Nitrogen species are commonly encountered in urban groundwater environments as a result of anthropogenic impacts including leaky sewer infrastructure. It is considered that the site is not a potential source of total nitrogen impact to groundwater. Elevated concentration of total nitrogen (as N) is considered to be representative of regional groundwater contamination associated with diffuse sources.

6.5.1.3 Chloride, Sodium and TDS

Concentrations of chloride, sodium and TDS were reported to exceed the adopted criteria for Water-based Recreation (Primary Contact Recreation). Chloride in site groundwater also exceeded the adopted criterion for Buildings and Structures.

Based on a review of published groundwater salinity data (VVG), the chemical status of groundwater at the site with respect to chloride, sodium and TDS is likely to be representative of regional salinity (3,500-7,000 mg/L), and not contamination.

6.6 Risks to Beneficial Uses of Groundwater

6.6.1 Water Dependent Ecosystems and Species

Results of the groundwater investigations indicated concentrations of boron, hexavalent chromium, copper, nickel, silver, zinc and total nitrogen (as N) exceeded the adopted criteria for Water Dependent Ecosystems and Species.

It is noted that the beneficial use 'Water Dependent Ecosystems and Species' applies at the point of groundwater discharge, which is expected to be Hovells Creek, approximately 3 km east of the site. The site is not considered likely to be a source for metals and nitrogen species reported in excess of the beneficial use criteria for Water Dependent Ecosystems and Species in groundwater beneath the site, and the metals and nitrogen species reported in groundwater are expected to attenuate prior to discharge to the inferred receiving surface water body. Furthermore, it is possible that diffuse sources of nitrogen species may exist between the site and Hovells Creek.

As such, it is considered that the condition of groundwater underlying the site is not expected to adversely impact on Water Dependent Ecosystems and Species.

6.6.2 Agriculture and Irrigation (Stock Watering)

There were no exceedances of the adopted groundwater quality objectives for 'Agriculture and Irrigation (Stock Watering)'. As such it is considered that the condition of groundwater underlying the site is not expected to adversely impact this beneficial use.

6.6.3 Water-based Recreation (Primary Contact Recreation)

Results of the groundwater investigations indicated concentrations of hexavalent chromium, chloride, sodium and TDS exceeded the adopted criteria for 'Water-based Recreation (Primary Contact Recreation)'.

Elevated concentrations of chloride, sodium and TDS are considered to be representative of background groundwater conditions and are not considered pollution. As such, it is considered that the elevated concentrations of chloride, sodium and TDS reported in groundwater underlying the site are unlikely to preclude the Water-based Recreation (Primary Contact Recreation).

Hexavalent chromium in onsite groundwater exceeded the adopted criterion for Water-based Recreation (Primary Contact Recreation). On this basis, it is considered that this beneficial use is potentially precluded by the elevated hexavalent chromium. However, further assessment is recommended to confirm the presence of hexavalent chromium pollution in groundwater underlying the site.

6.6.4 Industrial and Commercial

Groundwater quality objectives are not available for 'Industrial and Commercial', as such, it has been assumed that if the objectives for other extractive beneficial uses requiring protection (i.e., Agriculture and Irrigation (Stock Watering) and Water-based Recreation (Primary Contact Recreation) are achieved, then the beneficial use Industrial and Commercial will also be protected.

Concentrations of hexavalent chromium in onsite groundwater exceeded the adopted criterion for Water-based Recreation (Primary Contact Recreation). On this basis, it is considered the beneficial use Industrial and Commercial is potentially precluded by the elevated hexavalent chromium in site groundwater, recognising that different industrial water uses will have different water quality requirements. However, further assessment is recommended to confirm the presence of hexavalent chromium pollution in groundwater underlying the site.

6.6.5 Buildings and Structures

Concentrations of chloride in site groundwater indicate that the subsurface environment is likely to be "*mild*" to steel piles in groundwater in accordance with Table 6.5.2(C) of AS2159 (2009) *Piling – Design and Installation*. However, the chloride concentration was primarily attributed to naturally occurring concentrations which would not be considered pollution. Nevertheless, cognisance should be given to the requirements of construction materials and protection measures for steel and concrete piles per AS2159 (2009).

6.6.6 Traditional Owner Cultural Values and Cultural and Spiritual Values

Groundwater quality objectives are not available for Traditional Owner Cultural Values and Cultural and Spiritual Values, as such, the objectives for Water Dependent Ecosystems and Species and Water-based Recreation (Primary Contact Recreation) have been adopted as default objectives on the assumption that if these objectives are achieved, then the beneficial uses Traditional Owner Cultural Values and Cultural and Spiritual Values will also be protected.

Elevated concentrations total nitrogen (as N) in groundwater exceeded the adopted criterion for Water Dependent Ecosystems and Species is considered to be representative of regional groundwater contamination associated with diffuse anthropogenic sources or possibly from regional leaky sewer systems. In addition, hexavalent chromium in site groundwater exceeded the adopted criterion for Water-based Recreation (Primary Contact Recreation). As such, it is considered the beneficial uses of Traditional Owner Cultural Values and Cultural and Spiritual Values are precluded at the site.

7. Quality Assurance and Quality Control Assessment

Quality Assurance and Quality Control (QA/QC) procedures for the porewater and surface water runoff assessments were developed based on the guidance in Schedules B2 and B3 of the NEPM as well as Section 8 of the Standard guide to the investigation and sampling of sites with potentially contaminated soil (AS4482.1) (Standards Australia 2005).

Specific controls and procedures that were undertaken to ensure data quality; including field quality control, laboratory quality control and data validation. The data acceptance criteria and comparison of the criteria to the results of the investigation are summarised in **Table 7.1.** Non-compliance with defined criteria are further discussed in **Section 7.1**.

Table 7.1: Data acceptance criteria assessment

QA/QC Sample Type	Method of Assessment	Acceptable Range	Comparison to Data
Field QA/QC			
Blind Replicates and Split Samples	The assessment of blind replicate and split samples is undertaken by calculating the Relative Percent Difference (RPD) of the replicate or split concentration compared with the original sample concentration. The RPD is defined as: $$RPD = 100\,x\,\frac{\lvert X1 - X2\rvert}{Average}$$ Where: X1 and X2 are the concentrations of the original and replicate or split samples.	Typical RPDs are noted in AS4482.1-2005 as between 30-50%. Higher RPDs may be acceptable for heterogeneous material or where concentrations are close to the LOR (i.e. less than 10 times the LOR).	Inter- and intra-laboratory duplicates were calculated to be within the acceptable range, except for QA101_200616 (for Mn) and QA201_200616 (for Pb).
Trip Blanks and Rinsate Samples	Each trip blank and rinsate sample is analysed as per the original samples.	Analytical Result < LOR	All rinsate and trip blank samples reported concentrations < LOR.
Laboratory QA/QC			
Sample holding times	Period of time between sample collection, extraction and analysis as reported by the laboratory.	For soil and sediment samples, the samples are to be extracted within 60 days of sample collection and analysed within 30 days of extraction[1] For water samples, the samples are to be extracted within 14 days of sample collection and analysed within 28 days of extraction[2]	Samples were analysed within the specified acceptable holding times. Limited samples with holding time breeches are outline in **Section 7.1.**
Laboratory Duplicates	Assessment as per Blind Replicates and Split Samples.	As per laboratory QC report.	All laboratory duplicates were within the defined acceptable range.
Spike recoveries	Assessment is undertaken by determining the percent recovery of the known spike or addition to the sample. $$\%\,Recovery = 100\,x\,\frac{C - A}{B}$$ Where: A = Concentration of analyte determined in the original sample; B = Added Concentration; C = Calculated Concentration.	As per laboratory QC report	Spike recoveries were reported within the acceptance criteria. Any outliers are outlined in **Section 7.1**

QA/QC Sample Type	Method of Assessment	Acceptable Range	Comparison to Data
Method Blanks	Each blank is analysed as per the original samples.	Analytical Result < LOR	All method blanks reported concentrations < LOR.

Notes:

LOR = Laboratory Level of Reporting (LOR) or the minimum detection limit for an analyte.

Based on US EPA 821-R-11-007

Based on US EPA 537

7.1 QA/QC Non-compliance

A summary of investigation DQI non-compliance, as outlined above, are presented in **Table 7.2**.

Table 7.2: Summary of investigation QA/QC non-compliance

Lab Report	Matrix	Sample ID	Analyte / Result	Impact on investigation findings
Field duplicates				
EM2010198	Soil	TP02_0.2 *(primary)* QA101_200616 *(intra-lab duplicate)*	*Manganese – (RPD 40%)* 430 mg/kg 266 mg/kg	Manganese result in the primary samples was higher than the secondary results. As a conservative measure, the highest result was adopted. No material impact on the investigation findings is expected.
EM2010198 / 726502	Soil	TP02_0.2 *(primary)* QA201_200616 *(inter-lab duplicate)*	*Lead – (RPD 113%)* <5 mg/kg 18 mg/kg	The primary sample reported lead < LOR, whilst the secondary result was approximately 4 time the LOR (5 mg/kg), a margin of error can be expected at low concentrations. Both results were screened against the adopted criteria and neither results returned exceedances. No material impact on the investigation findings is expected.
Holding time				
EM2010198	Soil	TP01_0.2, TP01_2.0, TP05_0.2 and TP05_0.8	pH and conductivity / 2 days overdue	pH of non-compliant samples was within the range of other samples analysed, so these results are considered representative of site conditions. There were not criteria adopted for soil conductivity, so no material impact on investigation findings is expected.
EM2010819	Water	MW001_200625	pH / 6 days overdue	Field measurements for pH were adopted for groundwater, as such no material impact on investigation findings are expected.
			Formaldehyde / 4 days overdue	Results for non-compliant analytes were less than the laboratory LOR. Holding time non-compliance is not expected to have a material impact on the investigation findings.
			Synthetic pyrethroids and synergist / 1 day overdue	
Lab control spike				
EM2010198	Soil	*Internal lab QC sample*	Iodomethane (43.9%) Fenvalerate & esfenvalerate (133%)	Lab control spike recoveries were outside of the acceptable range (47-125% and 70-130% respectively). All analyses for these chemical groups were reported less than the LOR, as such no material impact on results findings are expected.
Matrix spike				
EM2010198	Soil	TP01_2.0 & TP02_0.8	Nitrite & nitrate (as N) (- %)	Could not be determined due to background levels greater than or equal to four times the spike level.

Lab Report	Matrix	Sample ID	Analyte / Result	Impact on investigation findings
EM2010590	Soil	STP02_0.3 & *internal lab QC sample*	Hexavalent chromium (39.4 and 47.5% respectively)	Recovery is less than the acceptable range (58-114%). Hexavalent chromium was reported less that the LOR for all samples in this workorder, no material impact on the investigations findings is expected.
		STP04_0.6	Mercury (117%)	Recovery is greater that the acceptable range (76-116%). Mercury was reported less that the LOR for all samples in this workorder, no material impact on the investigations findings is expected.
EM2010819	Water	MW001_200625	Picloram (47.2%) Clopyralid (39.8%) Acrylamide (18.3%)	Recovery is less than the acceptable range (70-144%, 70-145% and 70-128% respectively). All analyses for these chemical groups were reported less than the LOR, as such no material impact on results findings are expected

7.2 Adopted Criteria Technical Exceedances

Technical exceedances refer to instances where the laboratory LOR is greater than the guideline value adopted for a particular analyte. Where technical exceedances are reported, despite reporting a 'non-detect', the result can be considered a potential exceedance as we cannot demonstrate the beneficial use protected by the relevant guideline is not impacted. It is therefore considered a technical exceedance.

Table 7.3 presents a summary of the analytes where a technical exceedance was observed during this investigation, and summaries the guideline value which cannot be fully addressed. Note technical exceedances were only reported in groundwater results.

Table 7.3: Summary of technical exceedances

Analyte Group	Analyte	Conc. (µg/L)	Beneficial Use Criteria			
			WDES[1]	WR[2]	SW[3]	B&S
Metals	Mercury	<0.1	0.06 [A]	-	-	-
	Selenium	<10	5 [A]	-	-	-
PAHs	Anthracene	<2	0.1	-	-	-
	Benzo(a) pyrene	<2	0.1	0.01	0.01	-
	Fluoranthene	<2	1	-	-	-
	Phenanthrene	<2	0.6	-	-	-
Phenols	2,4,5-trichlorophenol	<2	0.05	-	-	-
	2,4-dichlorophenol	<2	0.5	-	-	-
	2-chlorophenol	<2	160	0.3 [B]	-	-
OCPs	4,4-DDE	<0.5	490	0.1 [B]	-	-
	Aldrin	<0.5	1	-	-	-
	Aldrin + Dieldrin	<0.5	0.03	-	-	-
	Chlordane	<0.5	0.001	-	-	-
	DDT	<2	-	0.3	0.3	-
	Dieldrin	<0.5	0.08	-	-	-
	Endrin	<0.5	0.01	-	-	-
	g-BHC (Lindane)	<0.5	0.01	-	-	-
	Heptachlor	<0.5	0.02	-	-	-

Analyte Group	Analyte	Conc. (µg/L)	Beneficial Use Criteria			
			WDES[1]	WR[2]	SW[3]	B&S
	Methoxychlor	<2	0.2	-	-	-
OPPs	Azinophos methyl	<0.5	0.09	0.3	0.3	-
	Chlorpyrifos	<0.5	0.005	-	-	-
	Diazinon	<0.5	0.02	-	-	-
	Dimethoate	<0.5	0.01	-	-	-
	Malathion	<0.5	0.01	-	-	-
	Parathion	<2	0.15	-	-	-
Other	Hexachlorobenzene	<0.5	0.05	-	-	-
	Bis(2-ethylhexyl) phthalate	<10	0.004	-	-	-
	2-Methyl-4-chlorophenoxyacetic acid	<10	1.4	-	-	-

Notes:

1) ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality – 95% protection trigger value for fresh water species. Low reliability trigger value was adopted (where available) in the absence of 95% LOP criteria.
2) Australian Drinking water guidelines are sourced from the NHMRC, NRMMC (2018) Australian Drinking Water Guidelines Paper 6 (updated August 2018).
3) ANZECC/ARMCANZ (2000) National Water Quality Management Strategy. Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Livestock Drinking Water Quality.

A) ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality – 99% protection trigger value for fresh water species to account for bioaccumulation potential

B) Value for the protection of aesthetic beneficial uses.

Jacobs does not consider the technical exceedances to materially affect the adequacy of the data for interpretation in this investigation. This is based on the aforementioned analytes not being detected in onsite soils and no indication that they are likely to be COPC for the site. On this basis, the reported technical exceedances are not considered to present a significant data quality issue.

8. Conclusions & Recommendations

The following key findings were made as a result of the soil and groundwater investigation at 164-200 McManus Road, Lara:

- Soil assessment;
  - Extensive fill material was observed across the site, the origin of which is unknown;
    - i Stockpiles were observed along the northern and southern boundary of the site, containing basaltic rubble.
    - ii Confirmed fill thicknesses were between 0.2 m and 1.0 m, however at the majority of investigation locations the fill thickness was not confirmed. The possibility of fill material thicknesses exceeding 2.0 m across a majority of the site was indicated. The nature of the fill material was generally consistent and appeared to be largely reworked natural material from the area.
  - Analytical results for sampled fill material and natural soils reported no exceedances of the adopted criteria, with the exception of nickel. Elevated nickel concentrations in soils are considered to be naturally occurring and derived from the natural basaltic soils.
  - The overall risk of contamination issues presenting a significant issue to the proposed development is considered to be low, based on the generally low concentrations of contaminants reported in the onsite soils.
  - The results also indicated that the condition of soil at the site is unlikely to pose a health risk to construction workers during the development.
  - The data is not sufficient to confirm actual disposal or reuse requirements for excavated soils. Based on the limited data, spoil generated from the construction activities and the existing stockpiles may be suitable for reuse onsite or for disposal as "Fill Material", subject to confirming that nickel concentrations can be demonstrated to be representative of natural soil concentrations.
  - The data is not sufficient to confirm actual management requirements for acid sulfate soils or potential acid sulfate soils. Overall, the limited data suggest that acid soils may be encountered to some extent during excavation works. The potential for acid generation due to excavation of material should be considered in the excavation planning works to ensure appropriate management.
  - The soils at the site are unlikely to pose a risk to the durability of concrete or steel construction materials.
- Groundwater assessment;
  - Groundwater was measured at 9.55 m bgl within weathered basalt of the Newer Volcanics formation.
  - Slug test analysis suggests a high hydraulic conductivity (approximately 10 m/day), however it is unclear whether this is representative of the aquifer due to uncertainties of the test.
  - Groundwater is likely to be encountered during construction of the EfW plant which has an anticipated excavation depth of 11 m bgl. The anticipated groundwater head above the base of the proposed excavation is, on that basis, 2.25 m (using monitoring data collected in June 2020). Hence an the management of groundwater inflows during construction will need to be addressed.
  - Analytical results reported elevated concentrations of select metals (boron, hexavalent chromium, copper, nickel, silver and zinc), chloride, total nitrogen (as N), sodium and TDS to exceed the adopted beneficial use criteria:
    - i Metals (boron, copper, nickel, silver and zinc), chloride, sodium and TDS are considered to be representative of background groundwater conditions and not considered pollution.
    - ii Total nitrogen (as N) and hexavalent chromium concentrations may be representative of regional groundwater contamination.

- The beneficial uses of Water Dependent Ecosystems and Species, Water-based Recreation (Primary Contact Recreation), Industrial and Commercial, are precluded at the site due to the elevated total nitrogen and hexavalent chromium reported in onsite groundwater. However, these beneficial uses are unlikely to be realised at the site based on the nature of the proposed development.
- Groundwater quality objectives are not available for Traditional Owner Cultural Values and Cultural and Spiritual Values. However, by adopting the lowest of objectives for other beneficial uses (generally water dependant ecosystems and species), these beneficial uses may be precluded.

Based on the above, the following recommendations are provided in relation to developing our current understanding of site conditions, and actions required to inform management of potential risks:

- Further groundwater investigations;
  - The PSI (Jacobs 2020) identified low to high potential for impact to the project to occur due to contaminant migration from potential offsite sources in the vicinity of the site (i.e. Shell LPG Terminal and Elgas LPG depot, transport warehouse and container yard, recycling facility, agricultural and industrial chemical manufacturing plants, metal galvanising facility, prescribed industrial waste management facilities). It is recommended that additional groundwater monitoring wells be installed at select locations around the site perimeter to assess the potential for contaminated groundwater to migrate onto the project area. The analytical suite adopted for groundwater analysis should consider contaminants of potential concern associated with those offsite land uses, including hexavalent chromium to assess the potential presence of this contaminant in onsite groundwater. It is recommended that the additional groundwater investigation coincides with geotechnical investigations for cost efficiency.
  - The slug test undertaken as part of this investigation reported a hydraulic conductivity of 10 m/day (and possibly higher) which would have significant implications for dewatering of the excavation, i.e. high inflow rates and associated costs of pumping and disposal of this water. As such, additional groundwater investigation is recommended which could include installing additional monitoring wells and undertaking slug tests as part of future geotechnical investigations. If high permeabilities are confirmed, conducting pumping tests (which are a more comprehensive method of testing aquifer permeability) would further inform aquifer permeability and dewatering requirements.
  - Groundwater disposal options should consider the guideline value exceedances presented in this report, which may dictate the available groundwater disposal options. Local groundwater users and potential groundwater dependant ecosystems should be considered as part of an impact assessment to determine potential impacts to environmental receptors as a result of construction dewatering, once the additional investigations are undertaken.
- Preparation of a Construction Environmental Management Plan;
  - The available data is not sufficient to allow the categorisation of the spoil requiring excavation during construction. The number of samples required for adequate classification of soil is dependent on the volume of material generated from construction activities (as per EPA publication IWRG 702). A Construction and Environmental Management Plan (CEMP) will be required to (i) outline the sampling and testing requirements to characterise the spoil in accordance with EPA requirements for the management and disposal of waste soil (including leachability testing), and (ii) identify an appropriate disposal facility (i.e. landfill) or reuse options. It is recommended that the analytical suite adopted for soil hazard categorisation be extended to include criteria for the protection of human health, to confirm management requirements (if any) for worker health and suitability of spoil for reuse.
  - Limited data suggests that acid soils may be encountered during the excavation works, and some potential for acid generation due to excavation of this material. It is recommended that the CEMP include, as a prudent measure, provision for management and disposal of PASS/AASS if required, including management measures during construction to avoid adverse environmental impacts, and for collection of soil data for assessment of presence of PASS/AASS.

9. References

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Appendix A. Derivation of Site-specific EILs

Table A.1: Physiochemical characteristics used in EIL derivation

Soil Physicochemical Properties	TP01_0.2	TP01_2.0	TP05_0.2	TP05_0.8
	Fill	Natural	Fill	Natural
Cation Exchange Capacity (cmolc/kg)	21.9	28.0	35.8	24.8
Clay content (%)	30	39	27	56
pH (CaCl2)	8.6	8.3	8.5	6.3
Organic carbon content (%)	<0.5 (LOR)	<0.5 (LOR)	<0.5 (LOR)	1.7

Table A.2: Adopted Ecological Investigation Levels

Contaminant	Ecological Investigation Levels for Urban Residential and Public Open Space Land Use (mg/kg)		Ecological Investigation Levels for Commercial and Industrial Land Use (mg/kg)	
	Fill	Natural Soil	Fill	Natural Soil
Arsenic	100		160	
DDT	180		640	
Naphthalene	170		370	
Lead	1,100		1,800	
Zinc	970	910	1500	1400
Chromium (III)	570	680	950	1100
Copper	230	220	330	320
Nickel	350	330	590	550

Table A.3: Derived EILs based on above physicochemical characteristics of soil samples (for reference only)

	TP01_0.2		TP01_2.0		TP05_0.2		TP05_0.8	
Analyte	Urban residential & public open spaces	Commercial & industrial	Urban residential & public open spaces	Commercial& industrial	Urban residential & public open spaces	Commercial& industrial	Urban residential & public open spaces	Commercial & industrial
Zinc	800	1200	960	1500	1200	1800	560	840
Chromium (III)	580	960	630	1100	560	930	710	1200
Copper	-	-	-	-	-	-	220	320
Nickel	290	490	340	580	400	680	320	540

Appendix B. Bore Logs

Environmental Soil Bore Log

Soil Bore No. HA01

Jacobs

Client: **Prospect Hill International Pty Ltd**
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 17/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Jacobs
Drill Rig: Hand Auger
Drill Method: Hand Auger
Final Depth: 0.45 mbgl

Bore Diameter (mm): 70
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
	0	HA01_0.1		**CLAY**, dark brown, low plasticity, moist, stiff. Trace stiff.	No visual contamination or odours observed.
	0	HA01_0.3		**CLAY**, brown, low plasticity, moist, firm. Some silt.	No visual contamination or odours observed.

End of Soil Bore at 0.45 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 795946.58
Northing: 5783757.30
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Soil Bore Log

Soil Bore No. HA02

Jacobs

Client: **Prospect Hill International Pty Ltd**
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 17/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Jacobs
Drill Rig: Hand Auger
Drill Method: Hand Auger
Final Depth: 0.80 mbgl

Bore Diameter (mm): 70
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill CLAY, orange-brown, low plasticity, moist, stiff, some subangular medium to coarse basaltic gravel (grey) and >15% silt. Change to grey colour	No visual contamination or odours observed.
	0	HA02_0.4		***Fill*** CLAY, grey with orange-brown mottling, low plasticity, moist, stiff, trace of subangular medium to coarse basaltic gravel (grey) and >15% sand.	No visual contamination or odours observed.
	0	HA02_0.55		**SILT**, brown, dry, soft. Roots present.	No visual contamination or odours observed.
	0	HA02_0.8		**CLAY**, red-brown, high plasticity, moist, stiff. trace silt. Rootlets present.	No visual contamination or odours observed.

End of Soil Bore at 0.80 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796139.33
Northing: 5783803.20
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Soil Bore Log

Soil Bore No. HA03

Jacobs

Client: Prospect Hill International Pty Ltd
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 17/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Jacobs
Drill Rig: Hand Auger
Drill Method: Hand Auger
Final Depth: 0.65 mbgl

Bore Diameter (mm): 70
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
	0	HA03_0.45		***Fill*** CLAY, brown-grey, low plasticity, moist, stiff, some subangular medium to coarse basaltic gravel (grey) and >15% silt.	No visual contamination or odours observed.
	0	HA03_0.55		**SILT**, brown, dry, soft, some gravel and >15% silt. Roots present.	No visual contamination or odours observed.
	0	HA03_0.6		**CLAY**, red-brown, high plasticity, moist, stiff some gravel and >15% silt. Rootlets present.	No visual contamination or odours observed.

End of Soil Bore at 0.65 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796045.96
Northing: 5783854.00
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Soil Bore Log

Soil Bore No. HA04

Jacobs

Client: **Prospect Hill International Pty Ltd**
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 18/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Jacobs
Drill Rig: Hand Auger
Drill Method: Hand Auger
Final Depth: 0.70 mbgl

Bore Diameter (mm): 70
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill CLAY, brown-grey, low plasticity, moist, firm, some subangular medium to coarse basaltic gravel (grey) and >15% silt.	No visual contamination or odours observed.
	0	HA04_0.4		***Fill*** SILT, brown-grey, dry, soft, some subangular medium to coarse basaltic gravel (grey) with clay.	No visual contamination or odours observed.
	0	HA04_0.7		***Fill*** SILT, brown-grey, dry, soft, some subangular medium to coarse basaltic gravel (grey) and >15% clay. White silty inclusions observed.	No visual contamination or odours observed.

End of Soil Bore at 0.70 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796079.49
Northing: 5784079.40
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Soil Bore Log

Soil Bore No. HA05

Jacobs

Client: Prospect Hill International Pty Ltd
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 18/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Jacobs
Drill Rig: Hand Auger
Drill Method: Hand Auger
Final Depth: 0.95 mbgl

Bore Diameter (mm): 70
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill CLAY, brown-grey, low plasticity, moist, stiff, some subangular medium to coarse basaltic gravel (grey) and >15% silt.	No visual contamination or odours observed.
	0	HA05_0.4			
				SILT, brown, dry, soft, some gravel and >15% silt. Roots present.	No visual contamination or odours observed.
	0	HA05_0.75		**CLAY**, red-brown, high plasticity, moist, very stiff. trace silt. Rootlets present.	No visual contamination or odours observed.
	0	HA05_0.85		**CLAY**, red-brown, low plasticity, moist, firm.	No visual contamination or odours observed.

End of Soil Bore at 0.95 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796285.38
Northing: 5783992.40
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental GW Well Log

GW Well No. MW001

Jacobs

Client: Prospect Hill International Pty Ltd
Project No: IS305100 **Project Name:** Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

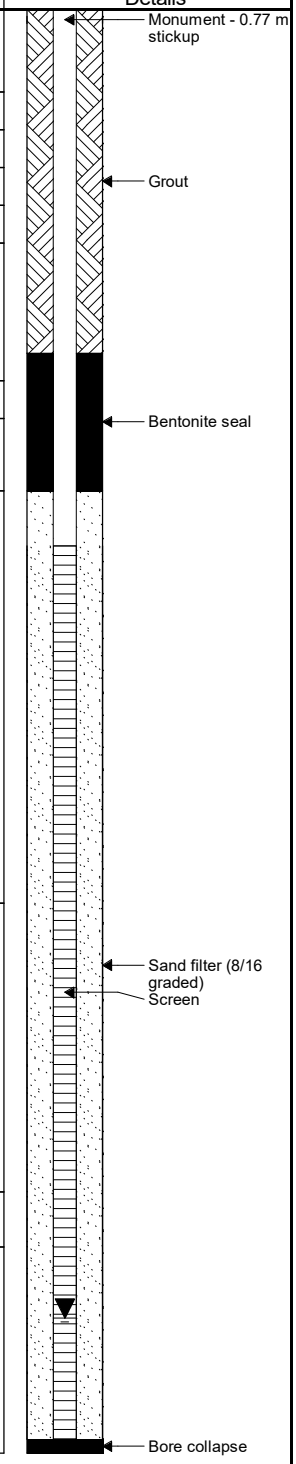
Date: 18/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Drilling Contractor: Star Drilling
Drill Rig: Geoprobe
Drill Method: Push tube / Air hammer
Final Depth: 10.50 mbgl

Bore Diameter (mm): 90
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
	0	MW001_0.2		***Fill*** CLAY, dark brown, high plasticity, moist, soft, trace of angular medium to coarse basaltic gravel (blue-grey) and >15% silt.	No visual contamination or odours observed.
				SILT, brown, dry, very soft. some rootlets.	No visual contamination or odours observed.
				CLAY, red-brown, high plasticity, dry, very stiff. some rootlets.	No visual contamination or odours observed.
1.0				**CLAY**, brown, low plasticity, moist, soft. some silt.	No visual contamination or odours observed.
				gravelly CLAY, brown, high plasticity, moist, very stiff, 50% angular medium to coarse basaltic gravel (blue-grey), with highly weathered basalt.	No visual contamination or odours observed.
	0	MW001_1.5		**BASALT**, light grey, dry. highly weathered basalt. White weathered basalt present.	No visual contamination or odours observed.
					No visual contamination or odours observed.
2.0				Change to air hammer drilling technique.	
	0	MW001_2.5			
				CLAY, high plasticity, dry, firm. INFERRED FROM DRILLERS OBSERVATIONS.	No visual contamination or odours observed.
3.0				**BASALT**, grey, dry. highly weathered.	No visual contamination or odours observed.
	0	MW001_3.5		**SILT**, brown, dry, soft, trace of subangular fine to medium basaltic gravel (grey). highly weathered gravels.	No visual contamination or odours observed.
4.0				Change to slightly moist	
5.0	0	MW001_5.0			
6.0					
				BASALT, grey, slightly moist, highly weathered.	No visual contamination or odours observed.
7.0					
8.0	0	MW001_8.0			
				NO CORE. Trace weathered basalt and quartzite sands observed.	No visual contamination or odours observed.
9.0				**BASALT**, grey, moist, highly weathered.	No visual contamination or odours observed.
10.0					

End of GW Well at 10.50 mbgl.



Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796071.48
Northing: 5783953.30
Coordinate System: GDA94 / MGA 55S

Water encountered

Standing water level

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Test Pit Log

Test Pit No. TP01

Jacobs

Project No: IS305100
Project Name: Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 16/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Excavator Contractor: Seeker Utility Engineering
Excavator: Yanmar V1017
Final Depth: 2.00 mbgl

Bore Diameter (mm):
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill GRAVEL, light grey, subangular, fine to medium grain, basaltic, loose, well graded.	No visual contamination or odours observed.
	0	TP01_0.2		***Fill*** CLAY, dark grey with white mottling, high plasticity, moist, soft, trace of subangular fine to medium basaltic gravel (light grey).	No visual contamination or odours observed.
	0	TP01_0.5			
	0	TP01_0.7		***Fill*** CLAY, light grey with white mottling, high plasticity, dry, soft, trace of subangular fine gravel (light grey) and >10% silt. Many angular basalt cobbles.	No visual contamination or odours observed.
1.0					
	0	TP01_1.5		***Fill*** CLAY, light grey with white mottling, high plasticity, dry, soft, trace of subangular fine gravel (light grey) and >10% silt. Some angular basalt cobbles.	No visual contamination or odours observed.
2.0	0	TP01_2.0		End of Test Pit at 2.00 mbgl.	

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796009.46
Northing: 5784064.40
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Test Pit Log

Test Pit No. TP02

Jacobs

Project No: IS305100
Project Name: Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 16/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Excavator Contractor: Seeker Utility Engineering
Excavator: Yanmar V1017
Final Depth: 1.95 mbgl

Bore Diameter (mm):
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
	0	TP02_0.2 QA101_200616 QA201_200616		***Fill*** CLAY, brown with light grey mottling, high plasticity, moist, trace subangular medium basaltic gravel (dark grey). Some angular basalt cobbles.	No visual contamination or odours observed.
	0	TP02_0.5			
		TP02_0.6		**SILT**, brown, dry, soft. Rootlets present.	No visual contamination or odours observed.
	0	TP02_0.8		**CLAY**, brown, high plasticity, slightly moist, very stiff. rootlets present.	No visual contamination or odours observed.
1.0				**CLAY**, red-brown, low plasticity, moist, firm. Some silt.	No visual contamination or odours observed.
	0	TP02_1.2			
	0	TP02_1.4		**CLAY**, light brown with orange-brown mottling, low plasticity, moist, firm, some subangular medium to coarse basaltic gravel (dark brown). White silty material present.	No visual contamination or odours observed.
	0	TP02_1.9			

End of Test Pit at 1.95 mbgl. Method refusal on fresh basalt.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796254.99
Northing: 5784033.40
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Test Pit Log

Test Pit No. TP03

Jacobs

Project No: IS305100
Project Name: Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 16/06/2020
Project Manager: Kate Munro
Logged By: JT
Checked By: AT

Excavator Contractor: Seeker Utility Engineering
Excavator: Yanmar V1017
Final Depth: 1.20 mbgl

Bore Diameter (mm):
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
	0	TP03_0.2		***Fill*** CLAY, light grey with white mottling, high plasticity, moist, soft, trace of subangular fine to medium basaltic gravel (dark grey) and silt. With angular basalt cobbles.	No visual contamination or odours observed.
	0	TP03_0.5		**SILT**, brown, dry, soft. Rootlets present.	No visual contamination or odours observed.
				CLAY, dark brown, high plasticity, dry, very stiff. rootlets present.	No visual contamination or odours observed.
	0.9	TP03_0.9		**CLAY**, red-brown, low plasticity, moist, firm.	No visual contamination or odours observed.
1.0	0	TP03_1.2		**CLAY**, brown with orange-brown mottling, low plasticity, moist, firm, trace of subangular medium to coarse grained sand (white). Some silt.	No visual contamination or odours observed.

End of Test Pit at 1.20 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796110.73
Northing: 5783892.10
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Test Pit Log

Test Pit No. TP04

Jacobs

Project No: IS305100
Project Name: Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 16/06/2020
Project Manager: Kate Munro
Logged By: AM
Checked By: AT

Excavator Contractor: Seeker Utility Engineering
Excavator: Yanmar V1017
Final Depth: 1.20 mbgl

Bore Diameter (mm):
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill CLAY, brown, moist, soft. Basalt gravels on surface.	No visual contamination or odours observed.
				Fill CLAY, grey, high plasticity, moist, soft. Trace white gravels observed.	No visual contamination or odours observed.
	0	TP04_0.3		***Fill*** CLAY, grey with light grey mottling, low plasticity, moist, very soft. Some silt and trace white gravels present.	No visual contamination or odours observed.
	0	TP04_0.7		SILT, brown, dry, very soft. Rootlets present.	No visual contamination or odours observed.
				CLAY, red-brown, dry, very stiff. rootlets present.	No visual contamination or odours observed.
1.0	0	TP04_1.1		**BASALT**, blue-grey, dry. highly weathered with white silty inclusions.	No visual contamination or odours observed.

End of Test Pit at 1.20 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 795963.01
Northing: 5783800.80
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Environmental Test Pit Log

Test Pit No. TP05

Jacobs

Project No: IS305100
Project Name: Prospect Hill EfW
Site: 164-200 McManus Rd, Lara

Date: 16/06/2020
Project Manager: Kate Munro
Logged By: AM
Checked By: AT

Excavator Contractor: Seeker Utility Engineering
Excavator: Yanmar V1017
Final Depth: 1.80 mbgl

Bore Diameter (mm):
Water Level (mbtoc):

Depth (mbgl)	PID	Sample ID	Graphic Log	Material Description	Comments/ Observations
				Fill CLAY, yellow-brown with orange-brown mottling, low plasticity, moist, soft, trace subangular basalt gravel and cobbles (dark grey) and >15% silt.	No visual contamination or odours observed.
	0	TP05_0.2		***Fill*** SILT, light brown, dry, very soft, with white silty inclusions.	No visual contamination or odours observed.
	0	TP05_0.6		**CLAY**, red-brown, high plasticity, dry, very stiff.	No visual contamination or odours observed.
	0	TP05_0.8		**CLAY**, grey and white, low plasticity, dry, soft, with highly weathered basalt.	No visual contamination or odours observed.
1.0					
	0	TP05_1.1		**BASALT**highly weathered (light grey). With light grey, low plasticity, dry, soft silty CLAY.	No visual contamination or odours observed.
	0	TP05_1.8			

End of Test Pit at 1.80 mbgl.

Top of Casing Elevation (mAHD):
Ground Surface Elevation (mAHD):
Easting: 796231.04
Northing: 5783771.80
Coordinate System: GDA94 / MGA 55S

Note: Log for environmental purposes only and not to be interpreted for geotechnical information

Appendix C. Field Records

Jacobs Groundwater Development Record

Well ID: **MW001**

Project Number: IS305100

Client: Prospect Hill International Pty Ltd

Location: 164-200 McManus Rd, Lara

Purging Information

Purged by: TaylorJ1

Date: 18/06/2020

Start time: 03:10 PM

Depth to pump: 11.0 mbtoc

Pump model: Waterra foot valve

Start SWL: 4.31 mbtoc

mbtoc

WQM model: YSI Professional

Depth of Well: 11.16 mbtoc

ppm

PID Model: MiniRAE 3000

End time: 04:00 PM

PSH thickness: 0 m

Equipment Calibration:

Time	SWL (mbTOC)	Draw down (m)	Cum. Volume Purged (L)	Pump Rate (L/min)	Temp. °C	pH	Eh mV	SC/EC µS/cm	DO mg/L	Comments (Colour, odour, turbidity...)
15:19:41	4.31	0.00	4.0	0.5	16.4	7.95	100	6795	7.87	Light Brown. Some Turbidity. No odour, No visual contamination
15:28:23	4.31	0.00	8.0	0.5	16.9	7.80	92	6893	7.60	Light Brown. Clearing. No odour, No visual contamination
15:37:32	4.31	0.00	25.0	2.0	17.0	7.76	82	7056	7.00	Light Brown. Slightly Turbid. No odour, No visual contamination
15:32:17	4.31	0.00	14.0	1.5	17.1	7.79	96	4494	8.44	Light Brown. Clearing. No odour, No visual contamination
15:40:12	4.31	0.00	30.0	1.5	17.7	7.80	82	7026	7.65	Light Brown. Slightly Turbid. No odour, No visual contamination
15:42:51	4.31	0.00	36.0	2.5	17.4	7.81	81	6984	7.09	Light Brown. Clearing. No odour, No visual contamination
15:47:11	4.31	0.00	42.0	1.5	17.0	7.79	82	7016	7.40	Light Brown. Slightly Turbid. No odour, No visual contamination

Purged & Sampled by: AM

Date: 18/06/2020

Checked by: JT

Date: 22/06/2020

Gauging

Date: 25/06/20 | Performed By: EM/AM | Well Diameter:

Gauging Method: Interface meter | Bore Depth: 11.20 m | LNAPL Present: Y / (N)

Time: 11:35 am | Depth to LNAPL: | (If yes, thickness):

SWL: 9.52 mTOC | DNAPL Present: Y / (N)

Comments: ~~To~~ Monument: 0.77 m above ground level | (If yes, thickness):

Visual confirmation with bailer: Y / N

Maintainance required: N/A

Photo Number: N/A

Purging / Development

Date: | Performed By: | Well Diameter:

Purge Method:

Time Started: | SWL (start): | Volume Removed: | Bore Depth (start):

Time Stopped: | SWL (end): | Discharge Rate: | Bore Depth (end):

Comments: | NAPL Present: Y / N

(If yes, thickness):

Sampling

Date: 25/06/20 | Performed By: EM/AM | Well Diameter:

Sampling Method: Low-flow | Sampling Depth: 10.40 m TOC

Time Started: 11:40am | SWL (start): 9.52 mTOC

Time Stopped: 1:30pm | SWL (end): 9.515

Tubing Type: dual

Comments:

Duplicate Sample Collected? (Y) N | Duplicate Sample ID: QC01_200625

Field Analyses

Tube disconnected from the flow cell

Time	Volume Removed (L)	EC (uS/cm)	pH	Temp (C)	Redox (mV)	Dissolved Oxygen (ppm)	Dissolved Oxygen (mg/L)	SWL TOC (m)	Comments (colour, turbidity, odours, sheen etc)	SPC
10:45am	0.5	24.1	6.78	17.3	-6.4		10.06	9.520	Clear, no colour	34.6
10:50	1.0	13.9	6.77	18.9	6.5		8.84	9.515	"	15.8
10:55	2.0	11.4	7.42	19.1	-49.9		8.88	9.510	"	12.9
12:00	2.5	10.3	8.03	19.3	-51.0		8.85	9.520	"	11.6
12:05	3.0	9.5	7.86	19.3	-51.0		9.03	9.515	"	10.7
12:10	3.5	8.8	7.71	18.4	-38.1		9.78	9.510	"	10.3
12:15	4.0	6102	6.82	17.2	42.4		7.44	9.515	"	7173
12:20	5.0	6069	6.66	17.0	57.7		6.78	9.510	"	7162
12:25	6.0	5963	6.51	16.3	71.9		6.81	9.510	"	7158
12:30	6.5	5950	6.71	16.3	70.7		6.75	9.510	"	7141
12:35	7.0	5919	6.68	16.0	78.0		6.72	9.510	"	7138
12:40	7.5	5963	6.55	16.4	86.4		6.20	9.515	"	7141
12:45	8.0	5940	6.61	16.2	84.1		6.19	9.515	"	7139
12:50	8.5	5916	6.62	16.1	87.0		6.25	9.510	"	7140
12:55	9.0	5886	6.67	15.9	85.4		6.51	9.515	"	7134
Stabilisation Criteria		+/- 3%	+/- 0.05		+/- 10mV	+/- 10%				

Well Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

TOTAL WELL DEPTH (-) WATER LEVEL (=) *WATER COLUMN*

_____ m (-) _____ (=) _____

WATER COLUMN (X) CONVERSION FACTOR (=) LITRES PER WELL VOLUME

_____ (X) _____ (=) _____ L

Appendix D. Stockpile Validation Log

Project no.:	IS305100	Project Name:	Prospect Hill Energy from Waste Plant
Date Range:	17th June 2020	Client:	Prospect Hill International Pty Ltd
Logged by:	JT / AM	General site observations:	Extensive fill material across the site. More defined stockpiles along the north and southern boundary.
Sampling Method:	Hand augur; 70 mm diameter.	Backfill Method:	Backfill with soil cuttings and compact.

Stockpile ID	Top (mbgl)	Bottom (mbgl)	Soil Description	Sample ID	PID (ppm)	Visual/Olfactory Signs of contamination [1]
STP01	0.0	0.3	FILL – Silty CLAY with basalt gravels; dark brown, soft, slightly moist, high plasticity.	STP01_0.2	0	0 / A
	0.3	0.5	FILL – Sandy CLAY; light grey, soft, slightly moist, medium plasticity.	STP01_0.4	0	0 / A
STP02	0.0	0.2	FILL – Silty CLAY with basalt gravels; brown and light grey, soft, slightly moist, high plasticity.	-	-	0 / A
	0.2	0.4	FILL – SILT with basalt gravels; brown, very loose, dry.	STP02_0.3	0	0 / A
	0.4	0.5	FILL – Silty CLAY with basalt gravels; brown and light grey, soft, moist, high plasticity.	STP02_0.4	0	0 / A
STP03	0.0	0.4	FILL – Silty CLAY with basalt gravels; grey and white, soft, slightly moist, medium plasticity.	STP03_0.2	0	0 / A
				STP03_0.4	0	0 / A
	REFUSAL ON GRAVELS					
STP04	0.0	0.5	FILL – Silty CLAY, with basalt gravels; light grey with green shade, soft, slightly moist, low plasticity. White silty inclusions	STP04_0.3	0	
	0.5	1.0	As above; increase of gravels and cobbles	STP04_0.6	0	0 / A
				STP04_0.9	0	0 / A
STP05	0.0	0.4	FILL – Silty CLAY with basalt gravels; grey with green shade, soft, slightly moist, low plasticity.	STP05_0.2	0	0 / A
	0.4	0.6	FILL – Clayey SILT with basalt gravels and cobbles; brown, loose, slightly moist.	STP05_0.6	0	0 / A
	REFUSAL ON GRAVELS					

Project no.:	IS305100	Project Name:	Prospect Hill Energy from Waste Plant
Date Range:	17th June 2020	Client:	Prospect Hill International Pty Ltd
Logged by:	JT / AM	General site observations:	Extensive fill material across the site. More defined stockpiles along the north and southern boundary.
Sampling Method:	Hand augur; 70 mm diameter.	Backfill Method:	Backfill with soil cuttings and compact.

Stockpile ID	Top (mbgl)	Bottom (mbgl)	Soil Description	Sample ID	PID (ppm)	Visual/Olfactory Signs of contamination [1]
STP06	0.0	0.3	FILL – Silty CLAY with basalt gravels; light grey with green shade, soft, slightly moist, low plasticity.	STP06_0.2	0	0 / A
	0.3	0.6	FILL – Clayey SILT with basalt gravels and cobbles; light grey with green shade, loose, dry.	STP06_0.5	0	0 / A
	0.6	0.7	NATURAL – SILT; brown, loose, dry.	STP06_0.6	0	0 / A
STP07	0.0	0.6	FILL – Silty CLAY, with basalt gravels; light and dark grey, soft, moist, medium plasticity.	STP07_0.3	0	0 / A
	0.6	0.7	NATURAL – SILT; brown, loose, dry.	STP07_0.6	0	0 / A
STP08	0.0	0.6	FILL – SILT with basalt gravels; light brown, soft, dry.	STP08_0.4	0	0 / A
	0.6	0.8	FILL – Clayey SILT with basalt gravels; brown, soft, slightly moist, low plasticity.	-	-	0 / A
	0.8	1.0	FILL – Silty CLAY with basalt gravels; brown, soft, slightly moist, low plasticity.	STP08_0.8	0	0 / A
	1.0	1.1	NATURAL – Silty CLAY; dark brown, stiff, slightly moist, low plasticity.	STP08_1.0	0	0 / A
STP09	0.0	0.5	FILL – Gravelly SILT with trace clay; brown with green shade, very loose, slightly moist.	-	-	0 / A
			REFUSAL ON COBBLES			
STP10	0.0	1.0	FILL – Clayey SILT with basal gravels and cobbles; brown, very loose, slightly moist.	STP10_0.6 STP10_0.9	0 0	0 / A 0 / A
	1.0	1.1	NATURAL – SILT; brown, loose, dry.	-	-	0 / A
STP 11	0.0	0.1	FILL – Gravelly CLAY; brown, very soft, moist, medium plasticity.	-	-	0 / A
	0.1	0.8	FILL – Gravelly SILT with basalt cobbles; brown, very loose, dry.	STP11_0.4	0	0 / A
			REFUSAL ON GRAVELS	STP11_0.8	0	0 / A

Project no.:	IS305100	Project Name:	Prospect Hill Energy from Waste Plant
Date Range:	18th June 2020	Client:	Prospect Hill International Pty Ltd
Logged by:	JT / AM	General site observations:	Extensive fill material across the site. More defined stockpiles along the north and southern boundary.
Sampling Method:	Hand augur; 70 mm diameter.	Backfill Method:	Backfill with soil cuttings and compact.

Stockpile ID	Top (mbgl)	Bottom (mbgl)	Soil Description	Sample ID	PID (ppm)	Visual/Olfactory Signs of contamination [1]
STP12	0.0	0.3	FILL – Gravelly CLAY; brown, very soft, moist, medium plasticity.	STP12_0.2	0	0 / A
	0.3	0.7	As above; increase in clay content	STP12_0.7	0	0 / A
			REFUSAL ON GRAVELS			
STP13	0.0	0.2	FILL – Gravelly CLAY with silt; light grey, soft, slightly moist, low plasticity	STP13_0.2	0	0 / A
STP14	0.0	0.2	FILL – CLAY with basalt gravels; brown, firm, moist, medium plasticity.	STP14_0.2	0	0 / A
STP15	0.0	0.2	FILL – Silty CLAY with basalt gravels; brown, soft, slightly moist, low plasticity.	STP15_0.2	0	0 / A
STP16	0.0	0.2	FILL – Gravelly CLAY; grey-brown, stiff, moist, medium plasticity.	STP16_0.2	0	0 / A
STP17	0.0	0.2	FILL – Silty CLAY; grey, soft, moist, medium plasticity.	STP17_0.2	0	0 / A
STP18	0.0	0.2	FILL – Silty CLAY with basalt gravels; brown with green shade, soft, moist, medium plasticity.	STP18_0.2	0	0 / A
STP19	0.0	0.2	FILL – Silty CLAY with basalt gravels; brown, soft, moist, low plasticity.	STP19_0.2	0	0 / A
STP20	0.0	0.2	FILL – Clayey SILT; brown, soft, dry.	STP20_0.2	0	0 / A

Notes:

1. Visual ranking: 0 - No Non-Natural odours, 1 - Slight Non-Natural odours, 2 - Moderate Non-Natural odours, 3 - Strong Non-Natural odours
   Odour ranking: A - No visible evidence of contamination, B - Slight visible contamination, C - Visible contamination, D - Significant visible contamination.

Appendix E. Photo Summary

Plate 1: Hand augering within natural soils at HA01.

Plate 2: Hand augering through fill material to natural soil at HA03.

Plate 3: Observed standing water; from HA04, facing south.

Plate 4: Surface condition of extensive fill material at TP01.

Plate 5: Test Pitting at TP03 and the observed soil profile.

Plate 6: Fill material encountered at TP05, suspected to be reworked natural soils.

Plate 7: Surface condition of stockpiles along northern boundary; at STP02.

Plate 8: Sampling deep fill material at STP03.

Plate 9: White, clayey silt inclusions observed within fill material, taken at STP04.

Plate 10: Natural soils underlying fill material at STP07.

Plate 11: Stockpile sampling at STP08.

Plate 12: Bore within stockpile, showing extent of basalt cobbles, at STP09.

Plate 13: Surface condition of stockpiles along southern boundary ; at STP12, facing north-west.

Plate 14: Surface condition of extensive fill material; at STP15, facing north-west.

Plate 15: Groundwater well installation at MW001

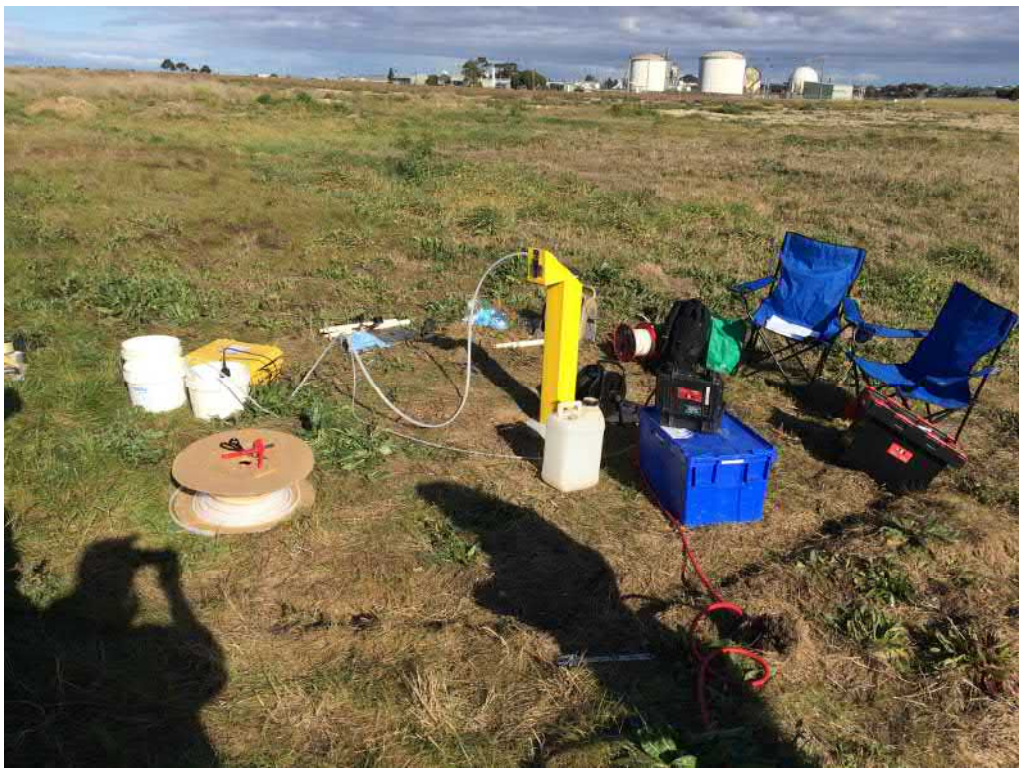


Plate 16: Groundwater sampling at MW001

Appendix F. Calibration Records

Equipment Calibration Form
MiniRAE 3000 PID

Enqip #: 11941

Company: Jacobs Group (Australia) Pty Ltd

Consultant: Jacob Taylor

PO #: IS305100

Certificate #: 17167

INSTRUMENT IDENTIFICATION

Model Number: PGM 7320

Serial Number: 592-915645

INSPECTION RECORD

Flow Rate: PASS

Buzzer: PASS

Date & Time: PASS

CALIBRATION DETAILS

Parameters	Standard	Result
Air	0.0 ppm	0.0 ppm
Isobutylene	100.0 ppm	100.0 ppm

Alarm Limits: **High** 100 **Low** 50

Calibration Successful: YES

Calibrated By: Darrin Arthur **Test Date:** 15/06/2020

116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au | **W** www.enqip.com.au

Equipment Calibration Form
YSI ProPlus

Enqip #: 11941

Company: Jacobs Group (Australia) Pty Ltd

Consultant: Jacob Taylor

PO #: IS305100

Certificate #: 17166

INSTRUMENT IDENTIFICATION

Model Number: 6050000

Serial Number: 18L100841

Instrument Type: YSI ProPlus

INSPECTION RECORD

Batteries Checked:	PASS	**Date & Time:**	PASS
Electrodes Cleaned/Checked:	PASS	**Temperature:**	PASS

CALIBRATION DETAILS

Sensor	Cal Solution	Value	Reading
pH	Buffer 4.00	4.00 pH	4.00 pH
	Buffer 7.00	7.00 pH	7.00 pH
Redox	Standard ORP	241.0 mV @ 15 °C	241.0 mV
O_2	Zero Dissolved Oxygen	0.0 %	0.0 %
	Air	100.0 %	100.0 %
Conductivity	Standard Conductivity	2.76 mS/cm	2.76 mS/cm

Calibration Successful: YES

Calibrated By: Andrea Hill

Test Date: 15/06/2020

enqip
116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au | **W** www.enqip.com.au

Instrument Quality Report
Interface Meter

Enqip #:	11942
Company:	Jacobs Group (Australia) Pty Ltd
Consultant:	Jacob Taylor
PO #:	IS305100
Certificate #:	17241

INSTRUMENT IDENTIFICATION

Instrument Type:	Solinst Interface Meter
Model Number:	122
Serial Number:	311998

INSPECTION RECORD

Battery:	PASS	**Water Tone:**	PASS
Tape Condition:	PASS	**Hydrocarbon Tone:**	PASS

Tested By: Will Hatzimihalis **Test Date:** 23/06/2020

116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au | **W** www.enqip.com.au

Equipment Calibration Form
YSI ProPlus

Enqip #: 11942

Company: Jacobs Group (Australia) Pty Ltd

Consultant: Jacob Taylor

PO #: IS305100

Certificate #: 17240

INSTRUMENT IDENTIFICATION

Model Number: 6050000

Serial Number: 18J100251

Instrument Type: YSI ProPlus

INSPECTION RECORD

Batteries Checked:	PASS	**Date & Time:**	PASS
Electrodes Cleaned/Checked:	PASS	**Temperature:**	PASS

CALIBRATION DETAILS

Sensor	Cal Solution	Value	Reading
pH	Buffer 4.00	4.00 pH	4.00 pH
	Buffer 7.00	7.00 pH	7.00 pH
Redox	Standard ORP	241 mV @ 15 °C	240.9 mV
O_2	Zero Dissolved Oxygen	0.0 %	0.0 %
	Air	100.0 %	100.0 %
Conductivity	Standard Conductivity	2.76 mS/cm	2.76 mS/cm

Calibration Successful: YES

Calibrated By: Doyle Schapendonk

Test Date: 23/06/2020

enqip
116 Thistlethwaite St, South Melbourne 3205
P 1300 218 987
E info@enqip.com.au | **W** www.enqip.com.au

Appendix G. Bore Construction Licence

COPY OF RECORD IN THE VICTORIAN WATER REGISTER

LICENCE TO CONSTRUCT WORKS

under Section 67 of the Water Act 1989

The information in this copy of record is as recorded at the time of printing. Current information should be obtained by a search of the register. The State of Victoria does not warrant the accuracy or completeness of this information and accepts no responsibility for any subsequent release, publication or reproduction of this information.

This licence does not remove the need to apply for any authorisation or permission necessary under any other Act of Parliament with respect to anything authorised by the works licence.

Water used under this licence is not fit for any use that may involve human consumption, directly or indirectly, without first being properly treated.

This licence is not to be interpreted as an endorsement of the design and/or construction of any works (including dams). The Authority does not accept any responsibility or liability for any suits or actions arising from injury, loss, damage or death to person or property which may arise from the maintenance, existence or use of the works.

Each person named as a licence holder is responsible for ensuring all the conditions of this licence are complied with.

This licence authorises its holders to construct the described works, subject to the conditions.

Licence Holder(s)

JIAN QI of 107 PROSPECT HILL ROAD CAMBERWELL VIC 3124
JACOB TAYLOR of LEVEL 11 452 FLINDERS STREET MELBOURNE VIC 3000

Licence Contact Details

J QI AND J TAYLOR	107 PROSPECT HILL ROAD CAMBERWELL VIC 3124

Licence Details

Expiry date	09 Jun 2021
Status	Active
Authority	Southern Rural Water
Name of waterway or aquifer	NA for construct/decommission
Water system	Unincorporated (GMU)

Summary of Licensed Works

The details in this section are a summary only. They are subject to the conditions specified in this licence.

Works ID	*Works type*	*Use of water*
WRK121239	Bore	Investigation
WRK121240	Bore	Investigation
WRK121241	Bore	Investigation
WRK121242	Bore	Investigation
WRK121243	Bore	Investigation
WRK121244	Bore	Investigation
WRK121245	Bore	Investigation
WRK121246	Bore	Investigation
WRK121247	Bore	Investigation
WRK121248	Bore	Investigation
WRK121249	Bore	Investigation
WRK121250	Bore	Investigation
WRK121251	Bore	Investigation
WRK121252	Bore	Investigation
WRK121253	Bore	Investigation
WRK121254	Bore	Investigation
WRK121255	Bore	Investigation
WRK121256	Bore	Investigation
WRK121257	Bore	Investigation
WRK121258	Bore	Investigation

Description of Licensed Works

WORKS ID WRK121239

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269438.606	5786204.194	Zone 55

Other land description

93 G2

Description of Licensed Works

WORKS ID WRK121240

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269518.888	5786192.929	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121241

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269603.170	5786181.750	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121242

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269691.496	5786168.658	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121243

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269766.778	5786157.285	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121244

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269426.427	5786119.890	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121245

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269508.688	5786109.668	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121246

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269594.057	5786094.511	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121247

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269678.361	5786082.333	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121248

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269758.708	5786068.067	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121249

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269748.985	5785962.807	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121250

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269664.768	5785970.985	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121251

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269580.485	5785982.164	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121252

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269500.181	5785994.429	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121253

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269411.921	5786004.521	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121254

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269394.545	5785883.086	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121255

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269488.892	5785869.125	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121256

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269572.196	5785856.924	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121257

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269661.478	5785845.855	Zone 55

Other land description
93 G2

Description of Licensed Works

WORKS ID WRK121258

Works type	Bore
Works subtype	Drilled bore
Proposed maximum depth	60.000 metres

Works location

Easting	*Northing*	*Zone MGA*
269739.826	5785831.546	Zone 55

Other land description

93 G2

Related Instruments

Related entitlements Nil

Related water-use entities Nil

Application History

Reference	*Type*	*Status*	*Lodged date*	*Approved date*	*Recorded date*
WLI613003	Issue	Approved	09 Jun 2020	09 Jun 2020	

Conditions

Licence WLE078564 is subject to the following conditions:

Siting and construction

1 The bore(s) must be drilled at the location specified in the application approved by the Authority.

2 If after drilling the bore is considered unsatisfactory a replacement bore may be drilled on the land specified in the licence.

Preventing pollution

3 All earthworks must be carried out, and all drilling fluids and waters produced during construction and development must be disposed of, in ways that avoid contaminating native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

4 Construction must stop immediately if the Authority reasonably believes that fuel, lubricant, drilling fluid, soil or water produced during construction and development is at risk of being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

5 The licence holder must construct and maintain bund walls, in accordance with the timeframe, specifications, guidelines or standards prescribed by the Authority, to prevent fuel, lubricant, drilling fluid, soil or water produced during construction and development from being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

Construction standards

6 The bore(s) must be constructed, and where relevant decommissioned, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3 or its successor.

Drilling licence and supervision requirements

7 The bore(s) must be constructed by, or under the direct supervision of, a driller licensed under the Water Act 1989 and endorsed as a Class 1, 2, or 3 driller, with appropriate endorsements.

8 If artesian pressure is expected or encountered, then a driller licensed under the Water Act 1989, and endorsed as a class 3 driller, must install casing in the bore(s) to a suitable depth, and in a suitable manner, to prevent its outbreak. A suitable valve must also be fitted to the bore.

Bore completion report

9 A Bore Completion Report must be submitted to the Authority within 28 working days of the bore(s) being completed.

Protecting water resources

10 At the completion of drilling, and before the drilling rig leaves the site, all bore(s) must be decommissioned so as to eliminate physical hazards, conserve aquifer yield, prevent groundwater contamination and prevent the intermingling of desirable and undesirable waters.

11 The bore(s) must be located at least 30 metres from any authority's channel, reserve or easement unless authorised by the Authority.

Protecting water quality

12 Drilling must not exceed the maximum depth.

13 The bore(s) must be constructed so as to prevent aquifer contamination caused by vertical flow outside the casing.

14 If two or more aquifers are encountered, the bore(s) must be constructed to ensure that an impervious seal is made and maintained between each aquifer to prevent aquifer connection through vertical flow outside the casing; under no circumstances are two or more aquifers to be screened within the one bore or in any other manner to allow connection between them.

15 Boreheads must be constructed, to ensure that no flood water, surface runoff or potential subsurface contaminated soakage can enter the bore or bore annulus.

Fees and charges

16 The licence holder must, when requested by the Authority, pay all fees, costs and other charges under the Water Act 1989 in respect of this licence.

END OF COPY OF RECORD

Appendix H. Laboratory Certificates of Analysis

COC received at 10:35

18/6/20

ALS

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
GOLD COAST 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: goldcoast@alsglobal.com
MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
MELBOURNE 3-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 024423 2063 E: nowra@alsglobal.com
PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9250 7555 E: samples.perth@alsglobal.com
SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: Jacobs	TURNAROUND REQUIREMENTS (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: Level 11 452 Flinders Street, Melbourne 3000			
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)	COC SEQUENCE NUMBER (Circle)	
ORDER NUMBER: 1578 (Eurofins - 1574)		COC: 1	
PROJECT MANAGER: Kate Munro	CONTACT PH:	OF: 2	
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093		
COC emailed to ALS? (YES)	EDD FORMAT (or default):		
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com			
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net			
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Jacob Taylor			
DATE/TIME: 16/06/2020 0800	DATE/TIME:	DATE/TIME:	DATE/TIME: 17/6 9:45

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL : Requested storage time for samples on HOLD to be advised via e

ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | CONTAINER INFORMATION | ANALYSIS REQUIRED Including SUITES (NB: Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required). | Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Adsorbed metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP+PCB (S-13)	pH field/rox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid+Carbamates / Triazine herbicides (EP234/EP202/EP232)	Total Cyanide (EK026SF)	Total Fluoride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (presence) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	
1	TP01_0.2	16/06/2020	Soil	ICE	7			X	X		X	X	X			X	X	X		X	X	X	X	X	X	X		
2	TP01_0.5	16/06/2020	Soil	ICE	1																							X
3	TP01_0.7	16/06/2020	Soil	ICE	1																							X
4	TP01_1.5	16/06/2020	Soil	ICE	1																							X
5	TP01_2.0	16/06/2020	Soil	ICE	4			X	X		X	X	X				X	X		X	X			X	X			
6	TP02_0.2	16/06/2020	Soil	ICE	4			X	X		X					X	X	X				X		X		X		
7	QA101_200616	16/06/2020	Soil	ICE	2			X	X		X																	
7	QA201_200616	16/06/2020	Soil	ICE	2			X	X		X																	PLEASE FORWARD TO EUROFINS
8	TP02_0.5	16/06/2020	Soil	ICE	1																							X
9	TP02_1.2	16/06/2020	Soil	ICE	1																							X
10	TP02_1.4	16/06/2020	Soil	ICE	1																							X
11	TP02_0.8	16/06/2020	Soil	ICE	2			X	X		X						X	X						X				
12	TP02_1.9	16/06/2020	Soil	ICE	1																							X
13	TP03_0.2	16/06/2020	Soil	ICE	4			X	X		X	X	X							X	X		X					
14	TP03_0.5	16/06/2020	Soil	ICE	1																							X
15	TP03_0.9	16/06/2020	Soil	ICE	3			X	X		X	X	X							X	X							
16	TP03_1.2	16/06/2020	Soil	ICE	1																							X
17	TP04_0.3	16/06/2020	Soil	ICE	2			X	X		X																	

Environmental Division
Melbourne
Work Order Reference
EM2010198

Telephone : + 61-3-8549 9600

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Jacobs	TURNAROUND REQUIREMENTS ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	COC SEQUENCE NUMBER (Circle) COC: 1 (2) OF: 2
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Jacob Taylor			Marina Chy
DATE/TIME: 16/06/2020 0800	DATE/TIME:	DATE/TIME:	DATE/TIME: 17/6 9am

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL : Requested storage time for samples on HOLD to be advised via e

ALS USE — SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB: Suite Codes must be listed to estimate suite price) — Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required) — Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP034)	Asbestos (presfabs) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
18	TP04_0.7	16/06/2020	Soil	ICE	2			X	X		X																		
19	TP04_1.1	16/06/2020	Soil	ICE	1																							X	
20	TP05_0.2	16/06/2020	Soil	ICE	7			X	X		X	X	X			X	X	X		X	X	X	X	X	X	X			
21	TP05_0.8	16/06/2020	Soil	ICE	4			X	X		X	X	X				X	X		X	X			X	X				
22	TP05_1.1	16/06/2020	Soil	ICE	1																							X	
23	TP05_1.8	16/06/2020	Soil	ICE	1																							X	
				TOTAL	55	0	0	12	12	0	12	6	6	0	0	3	6	6	0	6	6	3	3	6	4	3	0	12	

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

To: Peter Ravlic <peter.ravlic@alsglobal.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>; Metagesha, Ash <Ash.Metagesha@jacobs.com>
Subject: [EXTERNAL] - IS305100 CoC - 17/6/20 sample dispatch

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

Hi Peter,

Please see attached CoC for the samples to be dispatched tomorrow.

Can you please advise sample receipt of these incoming samples to ensure that they can be analysed ASAP to minimise any holding time breaches for *E. coli* and ASS analysis?

Also, for future sample dispatches, can you provide the email for Melbourne's sample receipt team?

Thanks again for your assistance with this job.

Kind Regards,
Jacob Taylor

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2010198**

Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: kate.munro@jacobs.com	E-mail	: peter.ravlic@alsglobal.com
Telephone	: ----	Telephone	: +6138549 9645
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: IS305100	Page	: 1 of 4
Order number	: 1578	Quote number	: EM2020SINKNI0005 (ME/473/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: AM, JT		

Dates

Date Samples Received	: 17-Jun-2020 09:45	Issue Date	: 17-Jun-2020
Client Requested Due Date	: 26-Jun-2020	Scheduled Reporting Date	: **26-Jun-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 6.1°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 25 / 11

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale, ALS Scoresby, ALS Sydney, ALS Newcastle, and ALS Brisbane.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Preliminary results will be available on the scheduled reporting date listed in this report. However a report with triazine herbicide analysis will be complete on 03/07/20.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035T (solids) Total Mercury by FIMS	SOIL - EG048G Total Hexavalent Chromium (Alkaline digestion)	SOIL - P-22 (Melb) Soil Characterisation Package	SOIL - S-13 OC/OP/PCB	SOIL - S-24 TRH/BTEXN/PAH + Phenols
EM2010198-001	16-Jun-2020 00:00	TP01_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-005	16-Jun-2020 00:00	TP01_2.0	▯	▯	▯	▯	▯	▯	▯
EM2010198-006	16-Jun-2020 00:00	TP02_0.2	▯	▯	▯	▯		▯	
EM2010198-007	16-Jun-2020 00:00	QA101_200616	▯	▯	▯	▯		▯	
EM2010198-011	16-Jun-2020 00:00	TP02_0.8	▯	▯	▯	▯		▯	
EM2010198-013	16-Jun-2020 00:00	TP03_0.2	▯	▯	▯	▯		▯	▯
EM2010198-015	16-Jun-2020 00:00	TP03_0.9	▯	▯	▯	▯		▯	▯
EM2010198-017	16-Jun-2020 00:00	TP04_0.3	▯	▯	▯	▯		▯	
EM2010198-018	16-Jun-2020 00:00	TP04_0.7	▯	▯	▯	▯		▯	
EM2010198-020	16-Jun-2020 00:00	TP05_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-021	16-Jun-2020 00:00	TP05_0.8	▯	▯	▯	▯	▯	▯	▯

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - Corr. Sched 7 Soil on Concrete & Steel Piles (AS2159-1995)	SOIL - EA003 pH field/fox	SOIL - EA033 Chromium Suite for Acid Sulphate Soils	SOIL - EP201(solids) Carbamate	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP234 Pesticide by LCMSMS (Positive Ion Mode)	SOIL - NT-8S NH3, NO2, NO3, NOX, TKN, TN, TP
EM2010198-001	16-Jun-2020 00:00	TP01_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-005	16-Jun-2020 00:00	TP01_2.0	▯	▯	▯				▯
EM2010198-006	16-Jun-2020 00:00	TP02_0.2				▯	▯	▯	▯
EM2010198-011	16-Jun-2020 00:00	TP02_0.8							▯
EM2010198-013	16-Jun-2020 00:00	TP03_0.2	▯	▯	▯				
EM2010198-015	16-Jun-2020 00:00	TP03_0.9	▯	▯	▯				
EM2010198-020	16-Jun-2020 00:00	TP05_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-021	16-Jun-2020 00:00	TP05_0.8	▯	▯	▯				▯

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EK026SF (Solids) Total Cyanide By Segmented Flow Analyser	SOIL - EK040T Total Fluoride	SOIL - EP069 Toxaphene by GCMS	SOIL - EP074 (solids) Volatile Organic Compounds	SOIL - EP094 Synthetic Pyrethroids by GCMS	SOIL - MM804 (EC) E.Coli MPN in Soil
EM2010198-001	16-Jun-2020 00:00	TP01_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-005	16-Jun-2020 00:00	TP01_2.0		▯	▯		▯		
EM2010198-006	16-Jun-2020 00:00	TP02_0.2		▯	▯	▯		▯	▯
EM2010198-011	16-Jun-2020 00:00	TP02_0.8		▯	▯				
EM2010198-013	16-Jun-2020 00:00	TP03_0.2	▯				▯		
EM2010198-015	16-Jun-2020 00:00	TP03_0.9					▯		
EM2010198-020	16-Jun-2020 00:00	TP05_0.2	▯	▯	▯	▯	▯	▯	▯
EM2010198-021	16-Jun-2020 00:00	TP05_0.8		▯	▯		▯		

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested
EM2010198-002	16-Jun-2020 00:00	TP01_0.5	▯
EM2010198-003	16-Jun-2020 00:00	TP01_0.7	▯
EM2010198-004	16-Jun-2020 00:00	TP01_1.5	▯
EM2010198-008	16-Jun-2020 00:00	TP02_0.5	▯
EM2010198-009	16-Jun-2020 00:00	TP02_1.2	▯
EM2010198-010	16-Jun-2020 00:00	TP02_1.4	▯
EM2010198-012	16-Jun-2020 00:00	TP02_1.9	▯
EM2010198-014	16-Jun-2020 00:00	TP03_0.5	▯
EM2010198-016	16-Jun-2020 00:00	TP03_1.2	▯
EM2010198-019	16-Jun-2020 00:00	TP04_1.1	▯
EM2010198-022	16-Jun-2020 00:00	TP05_1.1	▯
EM2010198-023	16-Jun-2020 00:00	TP05_1.8	▯
EM2010198-024	16-Jun-2020 00:00	TP02_0.6	▯
EM2010198-025	16-Jun-2020 00:00	TP05_0.6	▯

Proactive Holding Time Report

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

Requested Deliverables

ACCOUNTS PAYABLE (Brisbane)		
- A4 - AU Tax Invoice (INV)	Email	au-ap@jacobs.com
ARTHUR TEO		
- *AU Certificate of Analysis - NATA (COA)	Email	arthur.teo@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	arthur.teo@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	arthur.teo@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	arthur.teo@jacobs.com
- Attachment - Report (SUBCO)	Email	arthur.teo@jacobs.com
- Chain of Custody (CoC) (COC)	Email	arthur.teo@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	arthur.teo@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	arthur.teo@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	arthur.teo@jacobs.com
ASH METAGESHA		
- *AU Certificate of Analysis - NATA (COA)	Email	ash.metagesha@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ash.metagesha@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ash.metagesha@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ash.metagesha@jacobs.com
- Attachment - Report (SUBCO)	Email	ash.metagesha@jacobs.com
- Chain of Custody (CoC) (COC)	Email	ash.metagesha@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	ash.metagesha@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	ash.metagesha@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	ash.metagesha@jacobs.com
ESDAT LSPECS		
- EDI Format - ESDAT (ESDAT)	Email	labresults@jacobs.com
JACOB TAYLOR		
- *AU Certificate of Analysis - NATA (COA)	Email	Jacob.Taylor@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Jacob.Taylor@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Jacob.Taylor@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Jacob.Taylor@jacobs.com
- A4 - AU Tax Invoice (INV)	Email	Jacob.Taylor@jacobs.com
- Attachment - Report (SUBCO)	Email	Jacob.Taylor@jacobs.com
- Chain of Custody (CoC) (COC)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	Jacob.Taylor@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	Jacob.Taylor@jacobs.com
JACOBS RESULTS		
- EDI Format - ESDAT (ESDAT)	Email	jacobs.labresults@esdat.net
KATE MUNRO		
- A4 - AU Tax Invoice (INV)	Email	kate.munro@jacobs.com

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2010198**	Page	: 1 of 35
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020 09:45
Order number	: 1578	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020 16:49
Sampler	: AM, JT		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 25		
No. of samples analysed	: 11		

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

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

This Certificate of Analysis contains the following information:

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

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Morgan Lennox		Brisbane Organics, Stafford, QLD
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Samantha Smith	Laboratory Coordinator	WRG Subcontracting, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC

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

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

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

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

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

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

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

- pH analysis is done under non-stirring condition.
- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- MM868 (Coliforms & E. coli in Soils by MPN using Aquachrom ECC) - Analysis is conducted by ALS Scoresby NATA accreditation no. 992, site no. 989.
- ASS: EA033 (CRS Suite):Retained Acidity not required because pH KCl greater than or equal to 4.5
- ED045G: The presence of thiocyanate can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.
- ASS: EA033 (CRS Suite): Laboratory determinations of ANC needs to be corroborated by effectiveness of the measured ANC in relation to incubation ANC. Unless corroborated, the results of ANC testing should be discounted when determining Net Acidity for comparison with action criteria, or for the determination of the acidity hazard and required liming amounts.
- ASS: EA033 (CRS Suite): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from 'kg/t dry weight' to 'kg/m3 in-situ soil', multiply 'reported results' x 'wet bulk density of soil in t/m3'.
- ASS: EA003 (NATA Field and F(ox) screening): pH F(ox) Reaction Rate: 1 - Slight; 2 - Moderate; 3 - Strong; 4 - Extreme
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.

- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.6	8.3	----	----	----
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	9.8	9.2	----	----	----
EA002-AD: pH (Soils) dried at 40°C								
pH Value	----	0.1	pH Unit	8.8	7.8	----	----	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	9.9	9.3	----	----	----
pH (Fox)	----	0.1	pH Unit	10.0	9.6	----	----	----
Reaction Rate	----	1	Reaction Unit	4	4	----	----	----
EA010-AD: Conductivity (Soils) dried at 40°C								
Electrical Conductivity @ 25°C	----	1	µS/cm	852	1370	----	----	----
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	9.0	8.8	----	----	----
Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	----	----	----
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	0.008	0.008	----	----	----
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	----	----	----
EA033-C: Acid Neutralising Capacity								
Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	47.7	30.8	----	----	----
acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	9530	6150	----	----	----
sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	15.3	9.86	----	----	----
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	1.5	1.5	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	<10	<10	----	----	----
Liming Rate	----	1	kg CaCO3/t	<1	<1	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	<10	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	<1	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C) - Continued								
Moisture Content	----	1.0	%	26.3	----	----	----	----
Moisture Content	----	1.0	%	----	16.0	21.3	17.7	17.0
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	30	39	----	----	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	2.64	2.59	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Sample weight (dry)	----	0.01	g	31.1	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	U.DALKIN	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	3.4	6.1	----	----	----
ø Exchangeable Magnesium	----	0.2	meq/100g	9.5	11.7	----	----	----
ø Exchangeable Potassium	----	0.2	meq/100g	1.2	1.5	----	----	----
ø Exchangeable Sodium	----	0.2	meq/100g	7.8	8.7	----	----	----
ø Cation Exchange Capacity	----	0.2	meq/100g	21.9	28.0	----	----	----
ø Exchangeable Calcium Percent	----	0.2	%	15.4	21.8	----	----	----
ø Exchangeable Magnesium Percent	----	0.2	%	43.4	41.8	----	----	----
ø Exchangeable Potassium Percent	----	0.2	%	5.3	5.2	----	----	----
ø Exchangeable Sodium Percent	----	0.2	%	35.9	31.2	----	----	----
ø Calcium/Magnesium Ratio	----	0.2	-	0.4	0.5	----	----	----
ø Magnesium/Potassium Ratio	----	0.2	-	8.1	8.0	----	----	----
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	430	470	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	500	1090	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	<5	5	<5	<5
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	56	52	53	51	68
Cobalt	7440-48-4	2	mg/kg	23	17	20	15	19
Copper	7440-50-8	5	mg/kg	21	20	20	18	18
Iron	7439-89-6	0.005	%	3.97	3.93	----	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	9
Manganese	7439-96-5	5	mg/kg	629	395	430	288	294
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	76	61	64	56	43
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	5	mg/kg	<5	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	30	43	26	22	12
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	----	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	80	370	300	----	320
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	<20	<20	----	20
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	<0.1	<0.1	----	0.6
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg	0.3	48.1	0.1	----	33.6
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.3	48.1	0.1	----	34.2
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	150	320	150	----	1440
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	150	370	150	----	1470

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	502	231	162	----	196
EP004: Organic Matter								
Organic Matter	----	0.5	%	<0.5	0.6	----	----	----
Total Organic Carbon	----	0.5	%	<0.5	<0.5	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP069: Toxaphene								
Toxaphene	8001-35-2	2	mg/kg	<2	----	<2	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP094A: Synthetic Pyrethroids								
Bioresmethrin	28434-01-07	0.05	mg/kg	<0.05	----	<0.05	----	----
Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	----	<0.05	----	----
Phenothrin	26002-80-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Lambda-cyhalothrin	68085-85-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Permethrin	52645-53-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Cyfluthrin	68359-37-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Cypermethrin	52315-07-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenvalerate & Esfenvalerate	51630-58-1/66230-04-	0.05	mg/kg	<0.05	----	<0.05	----	----
Deltamethrin & Tralomethrin	62229-77-0/66841-25-	0.05	mg/kg	<0.05	----	<0.05	----	----
Allethrin	584-79-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Transfluthrin	118712-89-3	0.05	mg/kg	<0.05	----	<0.05	----	----
Tetramethrin	7696-12-0	0.05	mg/kg	<0.05	----	<0.05	----	----
Tau-fluvalinate	102851-06-9	0.05	mg/kg	<0.05	----	<0.05	----	----
EP094B: Synergist								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP094B: Synergist - Continued								
Piperonyl Butoxide	63993-73-7	0.05	mg/kg	<0.05	----	<0.05	----	----
EP201: Carbamate Pesticides by LCMS								
Oxamyl	23135-22-0	0.02	mg/kg	<0.02	----	<0.02	----	----
Methomyl	16752-77-5	0.02	mg/kg	<0.02	----	<0.02	----	----
3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg	<0.02	----	<0.02	----	----
Aldicarb	116-06-3	0.02	mg/kg	<0.02	----	<0.02	----	----
Bendiocarb	22781-23-3	0.02	mg/kg	<0.02	----	<0.02	----	----
Thiodicarb	59669-26-0	0.02	mg/kg	<0.02	----	<0.02	----	----
Carbofuran	1563-66-2	0.02	mg/kg	<0.02	----	<0.02	----	----
Carbaryl	63-25-2	0.02	mg/kg	<0.02	----	<0.02	----	----
Methiocarb	2032-65-7	0.02	mg/kg	<0.02	----	<0.02	----	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	----	<0.02	----	----
2.4-DB	94-82-6	0.02	mg/kg	<0.02	----	<0.02	----	----
Dicamba	1918-00-9	0.02	mg/kg	<0.02	----	<0.02	----	----
Mecoprop	93-65-2	0.02	mg/kg	<0.02	----	<0.02	----	----
MCPA	94-74-6	0.02	mg/kg	<0.02	----	<0.02	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.02	----	<0.02	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.02	----	<0.02	----	----
Triclopyr	55335-06-3	0.02	mg/kg	<0.02	----	<0.02	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	----	<0.02	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.02	----	<0.02	----	----
MCPB	94-81-5	0.02	mg/kg	<0.02	----	<0.02	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.02	----	<0.02	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.02	----	<0.02	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	----	<0.02	----	----
MM868: Coliforms & E.coli by MPN using Aquachrom ECC								
E.coli by MPN	----	10	MPN/g	<12	----	<12	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**98.7**	**111**	**108**	**108**	**111**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**92.7**	**99.6**	**95.7**	**97.8**	**99.4**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**72.8**	**81.3**	**79.5**	**79.6**	**85.7**

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP01_0.2	TP01_2.0	TP02_0.2	QA101_200616	TP02_0.8
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-001	EM2010198-005	EM2010198-006	EM2010198-007	EM2010198-011
				Result	Result	Result	Result	Result
EP069: Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	96.8	----	122	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	72.7	76.9	----	----	----
Toluene-D8	2037-26-5	0.5	%	82.2	86.9	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	90.1	91.9	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	93.6	100	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	90.3	95.9	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	69.6	74.9	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	100	108	----	----	----
Anthracene-d10	1719-06-8	0.5	%	103	111	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	99.4	108	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	75.7	80.6	----	----	----
Toluene-D8	2037-26-5	0.2	%	82.2	88.1	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	99.0	102	----	----	----
EP094S: Pesticide Surrogate								
DEF	78-48-8	0.05	%	82.1	----	85.8	----	----
EP201S: Carbamate Surrogate								
4-Bromo-3.5-dimethylphenyl-N-m ethylcarbamate	672-99-1	0.02	%	104	----	108	----	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	69.5	----	62.1	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	----	----	----	8.5
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	9.4	8.7	----	----	9.6
EA002-AD: pH (Soils) dried at 40°C								
pH Value	----	0.1	pH Unit	----	----	----	----	9.2
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	9.4	8.7	----	----	9.6
pH (Fox)	----	0.1	pH Unit	9.9	6.6	----	----	9.9
Reaction Rate	----	1	Reaction Unit	4	3	----	----	4
EA010-AD: Conductivity (Soils) dried at 40°C								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	----	----	1080
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	9.0	8.1	----	----	8.9
Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	----	----	<2
sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	----	----	<0.02
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	<0.005	<0.005	----	----	0.006
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	<10	----	----	<10
EA033-C: Acid Neutralising Capacity								
Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	20.7	2.34	----	----	42.5
acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	4130	467	----	----	8480
sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	6.62	0.75	----	----	13.6
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	1.5	1.5	----	----	1.5
Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	<0.02
Net Acidity (acidity units)	----	10	mole H+ / t	<10	<10	----	----	<10
Liming Rate	----	1	kg CaCO3/t	<1	<1	----	----	<1
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	<0.02	----	----	<0.02
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	<10	----	----	<10
Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	<1	----	----	<1
EA055: Moisture Content (Dried @ 105-110°C)								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C) - Continued								
Moisture Content	----	1.0	%	14.9	29.3	23.8	11.7	20.4
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	----	----	----	27
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	----	----	----	----	2.59
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	----	No
Asbestos Type	1332-21-4	-	--	-	----	----	----	-
Sample weight (dry)	----	0.01	g	39.5	----	----	----	42.0
APPROVED IDENTIFIER:	----	-	--	U.DALKIN	----	----	----	U.DALKIN
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	No
Organic Fibre	----	0.1	g/kg	No	----	----	----	No
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	----	----	----	----	8.0
ø Exchangeable Magnesium	----	0.2	meq/100g	----	----	----	----	13.9
ø Exchangeable Potassium	----	0.2	meq/100g	----	----	----	----	1.6
ø Exchangeable Sodium	----	0.2	meq/100g	----	----	----	----	12.4
ø Cation Exchange Capacity	----	0.2	meq/100g	----	----	----	----	35.8
ø Exchangeable Calcium Percent	----	0.2	%	----	----	----	----	22.2
ø Exchangeable Magnesium Percent	----	0.2	%	----	----	----	----	38.8
ø Exchangeable Potassium Percent	----	0.2	%	----	----	----	----	4.4
ø Exchangeable Sodium Percent	----	0.2	%	----	----	----	----	34.6
ø Calcium/Magnesium Ratio	----	0.2	-	----	----	----	----	0.6
ø Magnesium/Potassium Ratio	----	0.2	-	----	----	----	----	8.8
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	590	350	----	----	480
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	1600	1140	----	----	930
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Beryllium	7440-41-7	1	mg/kg	<1	1	1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EG005(ED093)T: Total Metals by ICP-AES - Continued								
Chromium	7440-47-3	2	mg/kg	56	66	63	60	76
Cobalt	7440-48-4	2	mg/kg	18	18	20	19	20
Copper	7440-50-8	5	mg/kg	21	13	19	15	20
Iron	7439-89-6	0.005	%	----	----	----	----	3.98
Lead	7439-92-1	5	mg/kg	<5	9	8	10	<5
Manganese	7439-96-5	5	mg/kg	430	346	518	419	635
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	68	53	51	37	59
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	5	mg/kg	<5	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	29	15	27	22	34
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	----	----	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	----	----	----	----	130
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	----	----	----	----	<20
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	----	----	----	----	<0.1
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg	----	----	----	----	0.1
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	----	----	----	----	0.1
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	----	----	----	----	220
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	----	----	----	----	220
EK067G: Total Phosphorus as P by Discrete Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EK067G: Total Phosphorus as P by Discrete Analyser - Continued								
Total Phosphorus as P	----	2	mg/kg	----	----	----	----	362
EP004: Organic Matter								
Organic Matter	----	0.5	%	----	----	----	----	<0.5
Total Organic Carbon	----	0.5	%	----	----	----	----	<0.5
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP069: Toxaphene								
Toxaphene	8001-35-2	2	mg/kg	----	----	----	----	<2
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	----	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	----	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	----	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	----	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	----	----	<5
Chloromethane	74-87-3	5	mg/kg	<5	<5	----	----	<5
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	----	----	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	----	----	<5
Chloroethane	75-00-3	5	mg/kg	<5	<5	----	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	----	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	<1
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	----	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	<1
EP094A: Synthetic Pyrethroids								
Bioresmethrin	28434-01-07	0.05	mg/kg	----	----	----	----	<0.05
Bifenthrin	82657-04-3	0.05	mg/kg	----	----	----	----	<0.05
Phenothrin	26002-80-2	0.05	mg/kg	----	----	----	----	<0.05
Lambda-cyhalothrin	68085-85-8	0.05	mg/kg	----	----	----	----	<0.05
Permethrin	52645-53-1	0.05	mg/kg	----	----	----	----	<0.05
Cyfluthrin	68359-37-5	0.05	mg/kg	----	----	----	----	<0.05
Cypermethrin	52315-07-8	0.05	mg/kg	----	----	----	----	<0.05
Fenvalerate & Esfenvalerate	51630-58-1/66230-04-	0.05	mg/kg	----	----	----	----	<0.05
Deltamethrin & Tralomethrin	62229-77-0/66841-25-	0.05	mg/kg	----	----	----	----	<0.05
Allethrin	584-79-2	0.05	mg/kg	----	----	----	----	<0.05
Transfluthrin	118712-89-3	0.05	mg/kg	----	----	----	----	<0.05
Tetramethrin	7696-12-0	0.05	mg/kg	----	----	----	----	<0.05
Tau-fluvalinate	102851-06-9	0.05	mg/kg	----	----	----	----	<0.05
EP094B: Synergist								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP094B: Synergist - Continued								
Piperonyl Butoxide	63993-73-7	0.05	mg/kg	----	----	----	----	<0.05
EP201: Carbamate Pesticides by LCMS								
Oxamyl	23135-22-0	0.02	mg/kg	----	----	----	----	<0.02
Methomyl	16752-77-5	0.02	mg/kg	----	----	----	----	<0.02
3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg	----	----	----	----	<0.02
Aldicarb	116-06-3	0.02	mg/kg	----	----	----	----	<0.02
Bendiocarb	22781-23-3	0.02	mg/kg	----	----	----	----	<0.02
Thiodicarb	59669-26-0	0.02	mg/kg	----	----	----	----	<0.02
Carbofuran	1563-66-2	0.02	mg/kg	----	----	----	----	<0.02
Carbaryl	63-25-2	0.02	mg/kg	----	----	----	----	<0.02
Methiocarb	2032-65-7	0.02	mg/kg	----	----	----	----	<0.02
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	----	----	<0.02
2.4-DB	94-82-6	0.02	mg/kg	----	----	----	----	<0.02
Dicamba	1918-00-9	0.02	mg/kg	----	----	----	----	<0.02
Mecoprop	93-65-2	0.02	mg/kg	----	----	----	----	<0.02
MCPA	94-74-6	0.02	mg/kg	----	----	----	----	<0.02
2.4-DP	120-36-5	0.02	mg/kg	----	----	----	----	<0.02
2.4-D	94-75-7	0.02	mg/kg	----	----	----	----	<0.02
Triclopyr	55335-06-3	0.02	mg/kg	----	----	----	----	<0.02
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	----	----	<0.02
2.4.5-T	93-76-5	0.02	mg/kg	----	----	----	----	<0.02
MCPB	94-81-5	0.02	mg/kg	----	----	----	----	<0.02
Picloram	1918-02-1	0.02	mg/kg	----	----	----	----	<0.02
Clopyralid	1702-17-6	0.02	mg/kg	----	----	----	----	<0.02
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	----	----	<0.02
MM868: Coliforms & E.coli by MPN using Aquachrom ECC								
E.coli by MPN	----	10	MPN/g	----	----	----	----	<12
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	110	109	108	98.9	103
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	105	110	97.5	93.4	94.6
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	84.4	89.2	78.7	94.0	94.4

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP03_0.2	TP03_0.9	TP04_0.3	TP04_0.7	TP05_0.2
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00	16-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010198-013	EM2010198-015	EM2010198-017	EM2010198-018	EM2010198-020
				Result	Result	Result	Result	Result
EP069: Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	97.4
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	79.7	67.4	----	----	71.3
Toluene-D8	2037-26-5	0.5	%	90.4	74.3	----	----	79.9
4-Bromofluorobenzene	460-00-4	0.5	%	96.6	82.7	----	----	87.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	98.4	100	----	----	100
2-Chlorophenol-D4	93951-73-6	0.5	%	94.2	95.2	----	----	97.0
2.4.6-Tribromophenol	118-79-6	0.5	%	72.2	75.6	----	----	75.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	106	106	----	----	109
Anthracene-d10	1719-06-8	0.5	%	108	112	----	----	109
4-Terphenyl-d14	1718-51-0	0.5	%	107	111	----	----	107
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.1	71.5	----	----	75.6
Toluene-D8	2037-26-5	0.2	%	90.8	74.8	----	----	79.7
4-Bromofluorobenzene	460-00-4	0.2	%	104	88.9	----	----	93.0
EP094S: Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	----	87.0
EP201S: Carbamate Surrogate								
4-Bromo-3.5-dimethylphenyl-N-m ethylcarbamate	672-99-1	0.02	%	----	----	----	----	105
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	----	----	70.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	6.3	----	----	----	----
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	7.5	----	----	----	----
EA002-AD: pH (Soils) dried at 40°C								
pH Value	----	0.1	pH Unit	8.4	----	----	----	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	7.8	----	----	----	----
pH (Fox)	----	0.1	pH Unit	4.7	----	----	----	----
Reaction Rate	----	1	Reaction Unit	3	----	----	----	----
EA010-AD: Conductivity (Soils) dried at 40°C								
Electrical Conductivity @ 25°C	----	1	µS/cm	1080	----	----	----	----
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	5.8	----	----	----	----
Titratable Actual Acidity (23F)	----	2	mole H+ / t	11	----	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	0.008	----	----	----	----
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	----	----	----	----
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	1.5	----	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	0.02	----	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	16	----	----	----	----
Liming Rate	----	1	kg CaCO3/t	1	----	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.02	----	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	16	----	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	1	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	18.8	----	----	----	----
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	56	----	----	----	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	2.42	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	**5.8**	----	----	----	----
ø Exchangeable Magnesium	----	0.2	meq/100g	**10.4**	----	----	----	----
ø Exchangeable Potassium	----	0.2	meq/100g	**3.0**	----	----	----	----
ø Exchangeable Sodium	----	0.2	meq/100g	**5.6**	----	----	----	----
ø Cation Exchange Capacity	----	0.2	meq/100g	**24.8**	----	----	----	----
ø Exchangeable Calcium Percent	----	0.2	%	**23.4**	----	----	----	----
ø Exchangeable Magnesium Percent	----	0.2	%	**41.9**	----	----	----	----
ø Exchangeable Potassium Percent	----	0.2	%	**12.3**	----	----	----	----
ø Exchangeable Sodium Percent	----	0.2	%	**22.4**	----	----	----	----
ø Calcium/Magnesium Ratio	----	0.2	-	**0.6**	----	----	----	----
ø Magnesium/Potassium Ratio	----	0.2	-	**3.4**	----	----	----	----
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	**60**	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	**890**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Beryllium	7440-41-7	1	mg/kg	**1**	----	----	----	----
Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**71**	----	----	----	----
Cobalt	7440-48-4	2	mg/kg	**24**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**18**	----	----	----	----
Iron	7439-89-6	0.005	%	**4.50**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**10**	----	----	----	----
Manganese	7439-96-5	5	mg/kg	**518**	----	----	----	----
Molybdenum	7439-98-7	2	mg/kg	<2	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**63**	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Silver	7440-22-4	2	mg/kg	<2	----	----	----	----
Tin	7440-31-5	5	mg/kg	<5	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**13**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	**390**	----	----	----	----
EK055: Ammonia as N								
Ammonia as N	7664-41-7	20	mg/kg	<20	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg	**49.3**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	**49.3**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	**1780**	----	----	----	----
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	**1830**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	**214**	----	----	----	----
EP004: Organic Matter								
Organic Matter	----	0.5	%	**2.9**	----	----	----	----
Total Organic Carbon	----	0.5	%	**1.7**	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued								
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	----	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP066S: PCB Surrogate								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TP05_0.8	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2010198-021	--------	--------	--------	--------
				Result	----	----	----	----
EP066S: PCB Surrogate - Continued								
Decachlorobiphenyl	2051-24-3	0.1	%	103	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	94.5	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	94.6	----	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	76.6	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	90.0	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	96.4	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	93.4	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	89.5	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	71.3	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	103	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	104	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	103	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	79.9	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	89.8	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	103	----	----	----	----

Sub-Matrix: SOIL

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TP01_0.2 - 16-Jun-2020 00:00	Beige clay like soil with rock matter.
EA200: Description	TP03_0.2 - 16-Jun-2020 00:00	Beige clay like soil with rock matter.
EA200: Description	TP05_0.2 - 16-Jun-2020 00:00	Tan beige clay like soil with rock matter.

Sub-Matrix: **SOIL**

Compound	CAS Number	%	
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	38	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	33	139
EP069: Surrogate			
Decachlorobiphenyl	2051-24-3	70	130
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
EP094S: Pesticide Surrogate			
DEF	78-48-8	10	110
EP201S: Carbamate Surrogate			
4-Bromo-3.5-dimethylphenyl-N-methylcarbamate	672-99-1	59	137
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139

CERTIFICATE OF ANALYSIS

Batch No:	**20-30645**	*Page*	Page 1 of 4
Final Report	832778	*Laboratory*	Scoresby Laboratory
		Address	Caribbean Business Park, 22 Dalmore Drive, Scoresby, VIC 3179
Client:	**Australian Laboratory Services Pty Ltd**	*Phone*	03 8756 8000
		Fax	03 9763 1862
Contact:	**Shirley LeCornu**	Contact:	Ximena Iglesias Client Manager Ximena.Iglesias@alsglobal.com
Address:	4 Westall Road SPRINGVALE VIC 3171 AUSTRALIA		
Client Program Ref:	**EM2010198**	Date Sampled:	16-Jun-2020
ALS Program Ref:	**ALS**	Date Samples Received:	23-Jun-2020
PO No:	**4404**	*Date Issued:*	**26-Jun-2020**

The hash (#) below indicates methods not covered by NATA accreditation in the performance of this service .

Analysis	*Method*	*Laboratory*	*Analysis*	*Method*	*Laboratory*	*Analysis*	*Method*	*Laboratory*
Triazines	# EP087	Scoresby						

Analysis of Triazine Herbicides commenced on 25/06/2020

Signatories

Legionella species refers to Legionella species other than Legionella pneumophila

Measurement Uncertainties values for your compliance results are available at this link

Name	*Title*	*Name*	*Title*
Kosta Christopoulos	**Deputy Team Leader Organics**		

Batch No: **20-30645**
Report Number: **832778**
Client: **Australian Laboratory Services Pty Ltd**
Client Program Ref: **EM2010198**

LOR = Limit of reporting. When a reported LOR is higher than the standard LOR, this may be due to high moisture content, insufficient sample or matrix interference.
CAS Number = Chemistry Abstract Services Number. The analytical procedures in this report (including in house methods) are developed from internationally recognised procedures such as those published by USEPA, APHA and NEPM.

				Sample No.	6604870	6604871	6604872
				Client Sample ID	EM2010198-001	EM2010198-006	EM2010198-020
				Sample Date	16/06/20	16/06/20	16/06/20
				Sample Type	SOIL	SOIL	SOIL
Analysis	**Analyte**	**CAS #**	**LOR**				
Triazines	Ametryn	834-12-8	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Atrazine	1912-24-9	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Prometon	1610-18-0	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Prometryn	7287-19-6	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Propazine	139-40-2	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Simazine	122-34-9	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Terbuthylazine	5915-41-3	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Simetryn	1014-70-6	<0.5	mg/kg	<0.5	<0.5	<0.5
Triazines	Terbutryn	886-50-0	<0.5	mg/kg	<0.5	<0.5	<0.5

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.
Water microbiological testing was commenced on the day received and within 24 hours of sampling unless otherwise stated.
MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate.
MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate.
Calculated results are based on raw data.

QUALITY CONTROL - BLANKS

QC Blanks are an 'analyte free' matrix in which all applicable reagents have been added in the same proportion as in standard samples and are an internal monitor for laboratory contamination.

Lab Sample ID	Client Sample ID	Analysis	Analyte		Value
6610151	QC - Blank	Triazines	Ametryn	mg/kg	<0.5
6610151	QC - Blank	Triazines	Atrazine	mg/kg	<0.5
6610151	QC - Blank	Triazines	Prometon	mg/kg	<0.5
6610151	QC - Blank	Triazines	Prometryn	mg/kg	<0.5
6610151	QC - Blank	Triazines	Propazine	mg/kg	<0.5
6610151	QC - Blank	Triazines	Simazine	mg/kg	<0.5
6610151	QC - Blank	Triazines	Terbuthylazine	mg/kg	<0.5
6610151	QC - Blank	Triazines	Simetryn	mg/kg	<0.5
6610151	QC - Blank	Triazines	Terbutryn	mg/kg	<0.5

QUALITY CONTROL - DUPLICATES

QC Data for duplicates is calculated on raw 'unrounded' values. Laboratory duplicates are randomly selected samples tested by the laboratory to maintain method precision and provide information on sample homogeniety.
RPD = Relative Percentage Difference for duplicate determinations. RPD's that fall outside the general acceptance criteria will be attributed to non-homogeneity of samples or results of low magnitudes.

Lab Sample ID	Client Sample ID	Analysis	Analyte		Sample Value	Duplicate Value	% RPD
6610149	EM2010198-001	Triazines	Ametryn	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Atrazine	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Prometon	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Prometryn	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Propazine	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Simazine	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Terbuthylazine	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Simetryn	mg/kg	<0.5	<0.5	0
6610149	EM2010198-001	Triazines	Terbutryn	mg/kg	<0.5	<0.5	0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil microbiological testing was commenced within 4 days from the day collected unless otherwise stated.
Water microbiological testing was commenced on the day received and within 24 hours of sampling unless otherwise stated.
MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate.
MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate.
Calculated results are based on raw data.

QUALITY CONTROL - SPIKES

QC Data for spikes is calculated on raw 'unrounded' values. Laboratory spikes are randomly selected samples in which the analytes in question have been artificially introduced and recovered via standard analysis and are used to provide information on potential matrix effects on analyte recoveries.
Spike recoveries that fall outside the general acceptance criteria will be attributed to sample matrix interference or results of high magnitudes.
NCP: Non-Customer Parent (sample quality is representative of the analytical batch but the sample that was QC tested belongs to a customer not pertaining to the report.)

					Sample Value	Expected Value	% Recovery
Lab Sample ID	**Client Sample ID**	**Analysis**	**Analyte**				
6610150	EM2010198-020	Triazines	Ametryn	mg/kg	<0.5	1.5	108
6610150	EM2010198-020	Triazines	Atrazine	mg/kg	<0.5	1.5	92.8
6610150	EM2010198-020	Triazines	Prometon	mg/kg	<0.5	1.5	84.0
6610150	EM2010198-020	Triazines	Prometryn	mg/kg	<0.5	1.5	107
6610150	EM2010198-020	Triazines	Propazine	mg/kg	<0.5	1.5	90.0
6610150	EM2010198-020	Triazines	Simazine	mg/kg	<0.5	1.5	84.2
6610150	EM2010198-020	Triazines	Terbuthylazine	mg/kg	<0.5	1.5	78.0
6610150	EM2010198-020	Triazines	Simetryn	mg/kg	<0.5	1.5	95.4
6610150	EM2010198-020	Triazines	Terbutryn	mg/kg	<0.5	1.5	111

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2010198**	Page	: 1 of 17
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020
Site	: ----	Issue Date	: 29-Jun-2020
Sampler	: AM, JT	No. of samples received	: 25
Order number	: 1578	No. of samples analysed	: 11

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

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

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP074E: Halogenated Aliphatic Compounds	QC-3094739-001	----	**Iodomethane**	74-88-4	43.9 %	47.0-125%	**Recovery less than lower control limit**
EP094A: Synthetic Pyrethroids	QC-3092677-002	----	**Fenvalerate & Esfenvalerate**	51630-58-1/66230-04-	133 %	70.0-130%	**Recovery greater than upper control limit**
Matrix Spike (MS) Recoveries							
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Ar	EM2010198--005	TP01_2.0	**Nitrite + Nitrate as N (Sol.)**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Ar	EM2010198--011	TP02_0.8	**Nitrite + Nitrate as N (Sol.)**	----	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Due for extraction	Days overdue	Analysis: Date analysed	Due for analysis	Days overdue
EA002-AD: pH (Soils) dried at 40°C							
Soil Glass Jar - Unpreserved							
TP01_0.2, TP05_0.2,	TP01_2.0, TP05_0.8	25-Jun-2020	23-Jun-2020	**2**	----	----	----
EA010-AD: Conductivity (Soils) dried at 40°C							
Soil Glass Jar - Unpreserved							
TP01_0.2, TP05_0.2,	TP01_2.0, TP05_0.8	25-Jun-2020	23-Jun-2020	**2**	----	----	----

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Due for extraction	Evaluation	Analysis: Date analysed	Due for analysis	Evaluation

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
EA002: pH 1:5 (Soils)							
Soil Glass Jar - Unpreserved (EA002) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
EA002-AD: pH (Soils) dried at 40°C							
Soil Glass Jar - Unpreserved (EA002-AD) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**25-Jun-2020**	23-Jun-2020	×	**25-Jun-2020**	25-Jun-2020	✓
EA003 :pH (field/fox)							
Snap Lock Bag - frozen on receipt at ALS (EA003) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	12-Mar-2023	✓	**23-Jun-2020**	21-Sep-2020	✓
EA010-AD: Conductivity (Soils) dried at 40°C							
Soil Glass Jar - Unpreserved (EA010-AD) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**25-Jun-2020**	23-Jun-2020	×	**25-Jun-2020**	23-Jul-2020	✓
EA033-A: Actual Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	16-Jun-2021	✓	**23-Jun-2020**	21-Sep-2020	✓
EA033-B: Potential Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	16-Jun-2021	✓	**23-Jun-2020**	21-Sep-2020	✓
EA033-C: Acid Neutralising Capacity							
Snap Lock Bag - frozen on receipt at ALS (EA033) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	16-Jun-2021	✓	**23-Jun-2020**	21-Sep-2020	✓
EA033-D: Retained Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	16-Jun-2021	✓	**23-Jun-2020**	21-Sep-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA033-E: Acid Base Accounting							
Snap Lock Bag - frozen on receipt at ALS (EA033) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	16-Jun-2021	✓	**23-Jun-2020**	21-Sep-2020	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QA101_200616, TP04_0.3, TP04_0.7	**16-Jun-2020**	**----**	----	----	**24-Jun-2020**	30-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) TP01_0.2, TP01_2.0, TP02_0.2, TP02_0.8, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**----**	----	----	**25-Jun-2020**	30-Jun-2020	✓
EA150: Soil Classification based on Particle Size							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**----**	----	----	**24-Jun-2020**	13-Dec-2020	✓
EA152: Soil Particle Density							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**----**	----	----	**24-Jun-2020**	13-Dec-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) TP01_0.2, TP03_0.2, TP05_0.2	**16-Jun-2020**	**----**	----	----	**17-Jun-2020**	13-Dec-2020	✓
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	14-Jul-2020	✓	**25-Jun-2020**	14-Jul-2020	✓
ED007: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED007) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	14-Jul-2020	✓	**25-Jun-2020**	14-Jul-2020	✓
ED008: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED008) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	14-Jul-2020	✓	**25-Jun-2020**	14-Jul-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED040S : Soluble Sulfate by ICPAES								
Soil Glass Jar - Unpreserved (ED040S)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	14-Jul-2020	✓	**23-Jun-2020**	21-Jul-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
ED045G: Chloride by Discrete Analyser								
Soil Glass Jar - Unpreserved (ED045G)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	14-Jul-2020	✓	**24-Jun-2020**	21-Jul-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**24-Jun-2020**	13-Dec-2020	✓	**24-Jun-2020**	13-Dec-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**24-Jun-2020**	14-Jul-2020	✓	**24-Jun-2020**	14-Jul-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	14-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EK026SF: Total CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK026SF)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**24-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	08-Jul-2020	✓
TP02_0.2,	TP02_0.8,							
TP05_0.2,	TP05_0.8							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK040T: Fluoride Total							
Soil Glass Jar - Unpreserved (EK040T) TP01_0.2, TP01_2.0, TP02_0.2, TP02_0.8, TP05_0.2, TP05_0.8	**16-Jun-2020**	**25-Jun-2020**	14-Jul-2020	✓	**26-Jun-2020**	14-Jul-2020	✓
EK055: Ammonia as N							
Soil Glass Jar - Unpreserved (EK055) TP01_0.2, TP01_2.0, TP02_0.2, TP02_0.8, TP05_0.2, TP05_0.8	**16-Jun-2020**	**----**	----	----	**25-Jun-2020**	13-Dec-2020	✓
EK057G: Nitrite as N by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK057G) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	13-Dec-2020	✓	**23-Jun-2020**	13-Dec-2020	✓
Soil Glass Jar - Unpreserved (EK057G) TP02_0.2, TP02_0.8	**16-Jun-2020**	**25-Jun-2020**	13-Dec-2020	✓	**25-Jun-2020**	13-Dec-2020	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK059G) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	13-Dec-2020	✓	**23-Jun-2020**	13-Dec-2020	✓
Soil Glass Jar - Unpreserved (EK059G) TP02_0.2, TP02_0.8	**16-Jun-2020**	**25-Jun-2020**	13-Dec-2020	✓	**25-Jun-2020**	13-Dec-2020	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Soil Glass Jar - Unpreserved (EK061G) TP01_0.2, TP01_2.0, TP02_0.2, TP02_0.8, TP05_0.2, TP05_0.8	**16-Jun-2020**	**18-Jun-2020**	13-Dec-2020	✓	**26-Jun-2020**	13-Dec-2020	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Soil Glass Jar - Unpreserved (EK067G) TP01_0.2, TP01_2.0, TP02_0.2, TP02_0.8, TP05_0.2, TP05_0.8	**16-Jun-2020**	**18-Jun-2020**	13-Dec-2020	✓	**26-Jun-2020**	13-Dec-2020	✓
EP004: Organic Matter							
Soil Glass Jar - Unpreserved (EP004) TP01_0.2, TP01_2.0, TP05_0.2, TP05_0.8	**16-Jun-2020**	**22-Jun-2020**	14-Jul-2020	✓	**22-Jun-2020**	14-Jul-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP02_0.2,	QA101_200616,							
TP02_0.8,	TP03_0.2,							
TP03_0.9,	TP04_0.3,							
TP04_0.7,	TP05_0.2,							
TP05_0.8								
EP069: Toxaphene								
Soil Glass Jar - Unpreserved (EP069)								
TP01_0.2,	TP02_0.2,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP05_0.2								
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074B: Oxygenated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074C: Sulfonated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074)								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**23-Jun-2020**	23-Jun-2020	✓	**23-Jun-2020**	23-Jun-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
TP01_0.2,	TP01_2.0,	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
TP03_0.2,	TP03_0.9,							
TP05_0.2,	TP05_0.8							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	30-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	30-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**25-Jun-2020**	30-Jun-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) TP01_0.2, TP01_2.0, TP03_0.2, TP03_0.9, TP05_0.2, TP05_0.8	**16-Jun-2020**	**23-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	30-Jun-2020	✓
EP094A: Synthetic Pyrethroids							
Soil Glass Jar - Unpreserved (EP094) TP01_0.2, TP02_0.2, TP05_0.2	**16-Jun-2020**	**22-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	01-Aug-2020	✓
EP094B: Synergist							
Soil Glass Jar - Unpreserved (EP094) TP01_0.2, TP02_0.2, TP05_0.2	**16-Jun-2020**	**22-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	01-Aug-2020	✓
EP201: Carbamate Pesticides by LCMS							
Soil Glass Jar - Unpreserved (EP201) TP01_0.2, TP02_0.2, TP05_0.2	**16-Jun-2020**	**23-Jun-2020**	30-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
EP202A: Phenoxyacetic Acid Herbicides by LCMS							
Soil Glass Jar - Unpreserved (EP202) TP01_0.2, TP02_0.2, TP05_0.2	**16-Jun-2020**	**22-Jun-2020**	30-Jun-2020	✓	**29-Jun-2020**	01-Aug-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
MM868: Coliforms & E.coli by MPN using Aquachrom ECC							
Sterile Plastic Jar (MM868)							
TP01_0.2, TP02_0.2, TP05_0.2	**16-Jun-2020**	**----**	----	----	**18-Jun-2020**	20-Jun-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Buchi Ammonia	EK055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chromium Suite for Acid Sulphate Soils	EA033	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	2	9	22.22	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH field/fox	EA003	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Toxaphene by GCMS	EP069	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Buchi Ammonia	EK055	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chromium Suite for Acid Sulphate Soils	EA033	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Toxaphene by GCMS	EP069	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Buchi Ammonia	EK055	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chromium Suite for Acid Sulphate Soils	EA033	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations on Alkaline Soils	ED006	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Anions - Soluble	ED040S	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Toxaphene by GCMS	EP069	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Buchi Ammonia	EK055	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride Soluble By Discrete Analyser	ED045G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N - Soluble by Discrete Analyser	EK057G	2	10	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TKN as N By Discrete Analyser	EK061G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosporus By Discrete Analyser	EK067G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Toxaphene by GCMS	EP069	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl2 extract	EA001	SOIL	In house: Referenced to Rayment and Lyons (2011) 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3)
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (2013) Schedule B(3)
pH (1:5) on 40°C dried soil	EA002-AD	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on 40°C dried soil after a 1:5 soil/water leach. This method is compliant with NEPM (2013) Schedule B(3)
pH field/fox	EA003	SOIL	In house: Referenced to Ahern et al 1998 - determined on a 1:5 soil/water extract designed to simulate field measured pH and pH after the extract has been oxidised with peroxide.
Electrical Conductivity (1:5) on 40°C dried soil	EA010-AD	SOIL	In house: Referenced to Rayment and Lyons 3A1 and APHA 2510. Conductivity is determined on soil samples dried at 40°C using a 1:5 soil/water leach. This method is compliant with NEPM (2013) Schedule B(3)
Chromium Suite for Acid Sulphate Soils	EA033	SOIL	In house: Referenced to Ahern et al 2004. This method covers the determination of Chromium Reducible Sulfur (SCR); pHKCl; titratable actual acidity (TAA); acid neutralising capacity by back titration (ANC); and net acid soluble sulfur (SNAS) which incorporates peroxide sulfur. It applies to soils and sediments (including sands) derived from coastal regions. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3 - 2003
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1-2006 : Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Exchangeable Cations on Alkaline Soils	* ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons (2011) Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 301)
Exchangeable Cations with pre-treatment	ED008	SOIL	In house: Referenced to Rayment & Higginson (2011) Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 301)
Major Anions - Soluble	ED040S	SOIL	In house: Soluble Anions are determined off a 1:5 soil / water extract by ICPAES.

Analytical Methods	Method	Matrix	Method Descriptions
Chloride Soluble By Discrete Analyser	ED045G	SOIL	In house: Referenced to APHA 4500-Cl- E. The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm. Analysis is performed on a 1:5 soil / water leachate.
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C / ASTM D7511. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3)
Total Fluoride	EK040T	SOIL	(In-house) Total fluoride is determined by ion specific electrode (ISE) in a solution obtained after a Sodium Carbonate / Potassium Carbonate fusion dissolution.
Buchi Ammonia	EK055	SOIL	In house: Referenced to APHA 4500-NH3 B&G, H Samples are steam distilled (Buchi) prior to analysis and quantified using titration, FIA or Discrete Analyser.
Nitrite as N - Soluble by Discrete Analyser	EK057G	SOIL	In house: Referenced to APHA 4500-NO3- B. Nitrite in a water extract is determined by direct colourimetry by Discrete Analyser.
Nitrate as N - Soluble by Discrete Analyser	EK058G	SOIL	In house: Referenced to APHA 4500-NO3- F. Nitrate in the 1:5 soil:water extract is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results.
Nitrite and Nitrate as N (NOx)- Soluble by Discrete Analyser	EK059G	SOIL	In house: Thermo Scientific Method D08727 and NEMI (National Environmental Method Index) Method ID: 9171. This method covers the determination of total oxidised nitrogen (NOx-N) and nitrate (NO3-N) by calculation, Combined oxidised Nitrogen (NO2+NO3) in a water extract is determined by direct colourimetry by Discrete Analyser.
TKN as N By Discrete Analyser	EK061G	SOIL	In house: Referenced to APHA 4500-Norg-D Soil samples are digested using Kjeldahl digestion followed by determination by Discrete Analyser.

Analytical Methods	Method	Matrix	Method Descriptions
Total Nitrogen as N (TKN + NOx) By Discrete Analyser	EK062G	SOIL	In house: Referenced to APHA 4500 Norg/NO3- Total Nitrogen is determined as the sum of TKN and Oxidised Nitrrogen, each determined seperately as N.
Total Phosporus By Discrete Analyser	EK067G	SOIL	In house: Referenced to APHA 4500 P-B&F This procedure involves sulfuric acid digestion and quantification using Discrete Analyser.
Organic Matter	EP004	SOIL	In house: Referenced to AS1289.4.1.1 - 1997. Dichromate oxidation method after Walkley and Black. This method is compliant with NEPM (2013) Schedule B(3).
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
Toxaphene by GCMS	EP069	SOIL	In house: Referenced to USEPA 8276. Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260D Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270E. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260D. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Synthetic Pyrethroids by GCMS	EP094	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
Carbamate Pesticides by LCMS	EP201	SOIL	In house: Referenced to USEPA Method 8318 LCMS (ES in positive mode). Residues of carbamates are extracted from soil samples using acetonitrile. The extract is evaporated to near dryness and the residues are dissolved in HPLC mobile phase prior to instrumental analysis.
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	SOIL	In house: LCMS (Electrospray in negative mode). Residues of acid herbicides are extracted from soil samples under the alkaline condition. An aliquot of the alkaline aqueous phase is taken and acidified before a SPE cleanup. After eluting off from the SPE cartridge, residues of acid herbicides are dissolved in HPLC mobile phase prior to instrument analysis.
Coliforms & E.coli in Soils by MPN using Aquachrom ECC	MM868	SOIL	Microbiological analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992).

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.

Preparation Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Higginson 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3) (Method 103)
Exchangeable Cations Preparation Method (Alkaline Soils)	ED006PR	SOIL	In house: Referenced to Rayment and Lyons 2011 method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Higginson (1992) method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
Total Fluoride	EK040T-PR	SOIL	In house: Samples are fused with Sodium Carbonate / Potassium Carbonate flux.
TKN/TP Digestion	EK061/EK067	SOIL	In house: Referenced to APHA 4500 Norg- D; APHA 4500 P - H. Macro Kjeldahl digestion.
Drying only	EN020D	SOIL	In house
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
1:5 solid / water leach following drying at 40°C	EN34-AD	SOIL	10 g of 40°C dried soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Organic Matter	EP004-PR	SOIL	In house: Referenced to AS1289.4.1.1 - 1997. Dichromate oxidation method after Walkley and Black. This method is compliant with NEPM (2013) Schedule B(3) (Method 105)
Extraction for Carbamates in Soils	EP201-PR	SOIL	In house: Referenced to USEPA Method 8318
Extraction for Phenoxy Acid Herbicides in Soils.	EP202-PR	SOIL	In-House: Alkaline extract followed by SPE clean up of acidified portion of the sample extract.
Sample preparation for Pesticides by LCMSMS	EP234-PR	SOIL	In house
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2010198**	Page	: 1 of 24
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020
Order number	: 1578	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020
Sampler	: AM, JT		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 25		
No. of samples analysed	: 11		

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

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

This Quality Control Report contains the following information:

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

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

Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Morgan Lennox		Brisbane Organics, Stafford, QLD
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Samantha Smith	Laboratory Coordinator	WRG Subcontracting, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC

General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3098572)									
EM2010198-001	TP01_0.2	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	56	65	14.4	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	23	20	13.3	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	76	72	5.44	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	8	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	21	24	11.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	629	551	13.1	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	30	32	6.73	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	3.97 %	44800	12.0	0% - 20%
EM2010198-020	TP05_0.2	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	76	83	8.89	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	20	18	11.3	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	59	61	2.47	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	22	8.18	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3098572) - continued									
EM2010198-020	TP05_0.2	EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	635	615	3.20	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	34	0.00	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	3.98 %	43900	9.74	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 3094772)									
EM2009496-001	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.7	5.7	0.00	0% - 20%
EM2010104-008	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	6.8	6.9	1.46	0% - 20%
EA002: pH 1:5 (Soils) (QC Lot: 3094764)									
EM2010431-003	Anonymous	EA002: pH Value	----	0.1	pH Unit	8.6	8.5	1.17	0% - 20%
EM2010198-001	TP01_0.2	EA002: pH Value	----	0.1	pH Unit	9.8	9.8	0.00	0% - 20%
EA003 :pH (field/fox) (QC Lot: 3094325)									
EM2010198-001	TP01_0.2	EA003: pH (F)	----	0.1	pH Unit	9.9	9.9	0.00	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	10.0	10.0	0.00	0% - 20%
EA033-A: Actual Acidity (QC Lot: 3093811)									
EB2016132-001	Anonymous	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.00	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	8.0	8.0	0.00	0% - 20%
EB2016270-006	Anonymous	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.00	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	7.8	7.8	0.00	0% - 20%
EA033-B: Potential Acidity (QC Lot: 3093811)									
EB2016132-001	Anonymous	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.301	0.296	1.50	0% - 20%
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	188	185	1.50	0% - 50%
EB2016270-006	Anonymous	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.026	0.027	0.00	No Limit
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	16	17	0.00	No Limit
EA033-C: Acid Neutralising Capacity (QC Lot: 3093811)									
EB2016132-001	Anonymous	EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	1.57	1.63	3.68	0% - 20%
		EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	0.50	0.52	3.68	0% - 20%
		EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	314	326	3.68	0% - 20%
EB2016270-006	Anonymous	EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	5.90	5.82	1.26	0% - 20%
		EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	1.89	1.86	1.26	0% - 20%

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EA033-C: Acid Neutralising Capacity (QC Lot: 3093811) - continued									
EB2016270-006	Anonymous	EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	1180	1160	1.26	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3098945)									
EM2010198-007	QA101_200616	EA055: Moisture Content	----	0.1	%	17.7	19.2	8.51	0% - 50%
EM2010511-009	Anonymous	EA055: Moisture Content	----	0.1	%	13.1	14.5	9.90	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3102107)									
EM2010198-005	TP01_2.0	EA055: Moisture Content	----	0.1	%	16.0	12.4	26.0	0% - 50%
EM2010507-003	Anonymous	EA055: Moisture Content	----	0.1	%	15.7	17.0	7.72	0% - 50%
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 3095519)									
EM2010198-001	TP01_0.2	ED006: Calcium/Magnesium Ratio	----	0.1	-	0.4	0.3	0.00	No Limit
		ED006: Magnesium/Potassium Ratio	----	0.1	-	8.1	9.7	17.4	0% - 20%
		ED006: Exchangeable Calcium Percent	----	0.2	%	15.4	13.3	14.8	0% - 20%
		ED006: Exchangeable Magnesium Percent	----	0.2	%	43.4	47.1	8.25	0% - 20%
		ED006: Exchangeable Potassium Percent	----	0.2	%	5.3	4.9	9.14	0% - 20%
		ED006: Exchangeable Sodium Percent	----	0.2	%	35.9	34.7	3.22	0% - 20%
		ED006: Exchangeable Calcium	----	0.2	meq/100g	3.4	2.6	27.5	0% - 50%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	9.5	9.1	4.57	0% - 20%
		ED006: Exchangeable Potassium	----	0.2	meq/100g	1.2	0.9	21.9	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	7.8	6.7	16.0	0% - 20%
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	21.9	19.2	12.8	0% - 20%
EM2010514-074	Anonymous	ED006: Calcium/Magnesium Ratio	----	0.1	-	2.7	2.4	12.6	0% - 50%
		ED006: Magnesium/Potassium Ratio	----	0.1	-	4.8	4.8	0.00	0% - 20%
		ED006: Exchangeable Calcium Percent	----	0.2	%	62.4	59.4	4.90	0% - 20%
		ED006: Exchangeable Magnesium Percent	----	0.2	%	23.2	25.0	7.75	0% - 20%
		ED006: Exchangeable Potassium Percent	----	0.2	%	4.8	5.2	8.03	0% - 20%
		ED006: Exchangeable Sodium Percent	----	0.2	%	9.6	10.3	7.14	0% - 20%
		ED006: Exchangeable Calcium	----	0.2	meq/100g	5.5	6.2	11.3	0% - 20%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	2.0	2.6	23.9	0% - 50%
		ED006: Exchangeable Potassium	----	0.2	meq/100g	0.4	0.5	24.2	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	0.8	1.1	23.3	No Limit
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	8.8	10.4	16.2	0% - 20%
ED040S: Soluble Major Anions (QC Lot: 3094762)									
EM2010431-003	Anonymous	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	1810	1840	1.49	0% - 20%
EM2010198-001	TP01_0.2	ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	430	460	7.57	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 3094763)									
EM2010431-003	Anonymous	ED045G: Chloride	16887-00-6	10	mg/kg	180	180	0.00	0% - 50%
EM2010198-001	TP01_0.2	ED045G: Chloride	16887-00-6	10	mg/kg	500	500	0.00	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3098571)									
EM2010198-001	TP01_0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3098571) - continued									
EM2010198-020	TP05_0.2	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3098519)									
EM2009353-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2009619-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3098520)									
EM2010198-018	TP04_0.7	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010512-035	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 3098884)									
EM2010198-001	TP01_0.2	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.00	No Limit
EM2010512-024	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.00	No Limit
EK040T: Fluoride Total (QC Lot: 3098002)									
EM2009353-001	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	100	120	16.5	No Limit
EM2009619-003	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	170	170	0.00	No Limit
EK055: Ammonia as N (QC Lot: 3100767)									
EM2010198-001	TP01_0.2	EK055: Ammonia as N	7664-41-7	20	mg/kg	<20	<20	0.00	No Limit
EM2010663-003	Anonymous	EK055: Ammonia as N	7664-41-7	20	mg/kg	<20	<20	0.00	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 3094766)									
EM2010198-001	TP01_0.2	EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 3100112)									
EM2010198-006	TP02_0.2	EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 3094765)									
EM2010198-001	TP01_0.2	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.3	0.3	0.00	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 3100113)									
EM2010198-006	TP02_0.2	EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	0.1	0.1	0.00	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 3085172)									
EM2010198-001	TP01_0.2	EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	150	150	0.00	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 3085171)									
EM2010198-001	TP01_0.2	EK067G: Total Phosphorus as P	----	2	mg/kg	502	462	8.31	0% - 20%
EP004: Organic Matter (QC Lot: 3090080)									
EM2010198-001	TP01_0.2	EP004: Organic Matter	----	0.5	%	<0.5	<0.5	0.00	No Limit
		EP004: Total Organic Carbon	----	0.5	%	<0.5	<0.5	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3097974)									
EM2010198-021	TP05_0.8	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2010198-001	TP01_0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3097973)									
EM2010198-021	TP05_0.8	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3097973) - continued									
EM2010198-021	TP05_0.8	EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EM2010198-001	TP01_0.2	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3097973)									
EM2010198-021	TP05_0.8	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EM2010198-001	TP01_0.2	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP069: Toxaphene (QC Lot: 3097977)									
EM2010198-001	TP01_0.2	EP069: Toxaphene	8001-35-2	2	mg/kg	<2	<2	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3094739) - continued									
EM2010198-001	TP01_0.2	EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074H: Naphthalene (QC Lot: 3094739)									
EM2010198-001	TP01_0.2	EP074: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3097976)									
EM2010198-001	TP01_0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP075(SIM)A: Phenolic Compounds (QC Lot: 3097976) - continued									
EM2010198-001	TP01_0.2	EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3097976)									
EM2010198-001	TP01_0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3094738)									
EM2010198-001	TP01_0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097975)									
EM2010198-021	TP05_0.8	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010198-001	TP01_0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3094738)									
EM2010198-001	TP01_0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097975)									
EM2010198-021	TP05_0.8	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010198-001	TP01_0.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 3094738)									
EM2010198-001	TP01_0.2	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP094A: Synthetic Pyrethroids (QC Lot: 3092677)									
EM2010198-001	TP01_0.2	EP094: Bioresmethrin	28434-01-07	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Phenothrin	26002-80-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Lambda-cyhalothrin	68085-85-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Permethrin	52645-53-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Cyfluthrin	68359-37-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Cypermethrin	52315-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Fenvalerate & Esfenvalerate	51630-58-1/66 230-04-	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Deltamethrin & Tralomethrin	62229-77-0/66 841-25-	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Allethrin	584-79-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Transfluthrin	118712-89-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Tetramethrin	7696-12-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP094: Tau-fluvalinate	102851-06-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP094B: Synergist (QC Lot: 3092677)									
EM2010198-001	TP01_0.2	EP094: Piperonyl Butoxide	63993-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP201: Carbamate Pesticides by LCMS (QC Lot: 3092172)									
ES2021158-017	Anonymous	EP201: Oxamyl	23135-22-0	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Methomyl	16752-77-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: 3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Aldicarb	116-06-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP201: Carbamate Pesticides by LCMS (QC Lot: 3092172) - continued									
ES2021158-017	Anonymous	EP201: Bendiocarb	22781-23-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Thiodicarb	59669-26-0	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Carbofuran	1563-66-2	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Carbaryl	63-25-2	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP201: Methiocarb	2032-65-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3106921)									
ES2021235-004	Anonymous	EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: MCPA	94-74-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: MCPB	94-81-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Picloram	1918-02-1	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
ES2021235-010	Anonymous	EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: MCPA	94-74-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: MCPB	94-81-5	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Picloram	1918-02-1	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
		EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	<0.04	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098572)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	105	78.5	107
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	111	85.4	114
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	124	84.4	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	97.2	76.2	108
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	94.6	77.7	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	99.3	78.1	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	95.5	78.1	108
EG005T: Iron	7439-89-6	50	mg/kg	<50	8400 mg/kg	90.0	83.5	112
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	99.0	78.4	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	105	80.6	110
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	90.5	78.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	102	79.9	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	103	92.0	110
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	80.9	80.0	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	88.7	78.4	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	96.7	79.1	110
EA033-A: Actual Acidity (QCLot: 3093811)								
EA033: pH KCl (23A)	----	----	pH Unit	----	4.4 pH Unit	100	91.0	107
EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	15 mole H+ / t	114	70.0	124
EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033-B: Potential Acidity (QCLot: 3093811)								
EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	<0.005	0.198 % S	88.7	77.0	121
EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	----	----	----	----
EA033-C: Acid Neutralising Capacity (QCLot: 3093811)								
EA033: Acid Neutralising Capacity (19A2)	----	0.01	% CaCO3	<0.01	10 % CaCO3	99.1	91.0	112
EA033: acidity - Acid Neutralising Capacity (a-19A2)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Acid Neutralising Capacity (s-19A2)	----	0.01	% pyrite S	<0.01	----	----	----	----
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 3095519)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	33 meq/100g	80.0	66.6	101
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	32 meq/100g	73.8	66.9	120
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	2.2 meq/100g	97.8	72.8	119
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	5.6 meq/100g	81.8	67.5	112
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Calcium Percent	----	0.2	%	<0.2	----	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 3095519) - continued								
ED006: Exchangeable Magnesium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Exchangeable Potassium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED006: Calcium/Magnesium Ratio	----	0.1	-	<0.1	----	----	----	----
ED006: Magnesium/Potassium Ratio	----	0.1	-	<0.1	----	----	----	----
ED040S: Soluble Major Anions (QCLot: 3094762)								
ED040S: Sulfate as SO4 2-	14808-79-8	10	mg/kg	<10	----	----	----	----
ED045G: Chloride by Discrete Analyser (QCLot: 3094763)								
ED045G: Chloride	16887-00-6	10	mg/kg	<10	50 mg/kg	101	85.5	120
				<10	5000 mg/kg	102	85.5	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098571)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	103	76.9	110
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098519)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	81.8	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098520)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	77.9	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098884)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	114	70.0	130
EK040T: Fluoride Total (QCLot: 3098002)								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	96.0	75.2	110
EK055: Ammonia as N (QCLot: 3100767)								
EK055: Ammonia as N	7664-41-7	20	mg/kg	<20	25 mg/kg	90.6	83.0	109
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3094766)								
EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	2.5 mg/kg	105	88.9	113
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3100112)								
EK057G: Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	2.5 mg/kg	106	88.9	113
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3094765)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	108	89.5	119
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3100113)								
EK059G: Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	<0.1	2.5 mg/kg	107	89.5	119
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3085172)								
EK061G: Total Kjeldahl Nitrogen as N	----	20	mg/kg	<20	500 mg/kg	80.5	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3085171)								
EK067G: Total Phosphorus as P	----	2	mg/kg	<2	221 mg/kg	104	78.3	127
EP004: Organic Matter (QCLot: 3090080)								
EP004: Organic Matter	----	0.5	%	<0.5	77 %	80.1	66.8	110

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP004: Organic Matter (QCLot: 3090080) - continued								
EP004: Total Organic Carbon	----	0.5	%	<0.5	43.5 %	82.3	68.7	112
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3097974)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1.18 mg/kg	104	63.2	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 3097973)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	100	74.2	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	65.1	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	71.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	100.0	71.1	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	108	64.8	128
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	116	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	73.0	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	72.0	124
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.2	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	83.4	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	83.3	55.5	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3097973)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	111	69.5	132
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	63.0	129
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	48.4	10.0	136
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	58.3	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	69.0	121
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	68.0	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	88.9	59.6	124
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	63.8	128
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	71.1	124
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	113	67.4	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	85.0	57.9	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.7	66.2	123

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3097973) - continued								
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	59.8	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	64.1	123
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	51.8	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	64.8	122
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	63.2	124
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	65.9	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.2	43.1	131
EP069: Toxaphene (QCLot: 3097977)								
EP069: Toxaphene	8001-35-2	2	mg/kg	<2	10 mg/kg	110	69.8	128
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3094739)								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	92.8	69.9	120
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	93.0	70.9	115
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	69.8	114
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	100	69.2	118
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	95.7	69.8	115
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	73.2	119
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	93.1	66.5	114
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	79.4	56.8	107
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	79.9	61.2	106
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	78.2	58.4	109
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	79.9	60.2	107
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	80.6	62.4	108
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	88.4	59.1	111
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	83.2	51.1	109
EP074B: Oxygenated Compounds (QCLot: 3094739)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	91.4	61.9	127
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	86.4	61.2	128
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	94.4	63.2	137
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	88.9	65.0	128
EP074C: Sulfonated Compounds (QCLot: 3094739)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	79.6	48.5	121
EP074D: Fumigants (QCLot: 3094739)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	83.8	61.4	115
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	82.9	70.1	113
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	81.8	63.2	107
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	85.7	64.8	107
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	89.1	68.3	110

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3094739)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	38.0	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	79.1	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	76.4	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	67.5	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	90.6	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	83.7	60.1	123
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	79.4	61.7	119
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	# 43.9	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	81.0	63.6	115
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	84.9	68.0	116
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	89.5	71.0	118
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	78.4	62.4	115
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	80.6	60.3	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	77.0	57.7	112
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	83.9	73.0	116
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	86.2	65.5	117
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	85.9	69.8	111
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	90.9	75.6	115
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	98.2	74.5	116
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	86.5	62.6	116
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	82.3	63.2	105
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	99.7	57.5	112
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	83.8	57.8	109
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	108	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	102	72.8	119
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	76.9	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	80.4	60.8	104
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	109	54.1	132
EP074F: Halogenated Aromatic Compounds (QCLot: 3094739)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	94.4	72.8	112
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	83.9	67.1	110
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	83.3	64.4	108
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	80.3	62.2	107
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	87.3	64.6	113
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	93.2	66.1	119
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	90.5	72.4	110
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	97.2	52.3	120
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	119
EP074G: Trihalomethanes (QCLot: 3094739)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP074G: Trihalomethanes (QCLot: 3094739) - continued								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	89.5	71.8	116
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	85.4	67.2	111
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	86.4	65.4	105
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	88.0	60.5	104
EP074H: Naphthalene (QCLot: 3094739)								
EP074: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	93.1	69.9	115
EP075(SIM)A: Phenolic Compounds (QCLot: 3097976)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	100	80.6	124
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	99.3	81.4	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	102	82.4	124
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	102	80.9	128
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	77.9	51.4	123
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	101	79.0	127
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	96.3	76.0	125
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	96.1	78.6	125
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	93.6	69.9	121
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	87.2	63.9	120
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	90.7	64.8	123
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	63.6	20.0	117
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097976)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	100	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	97.6	76.9	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	102	85.3	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	101	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	104	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	108	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	102	83.4	136
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	105	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	98.1	80.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	102	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	90.8	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	103	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	90.2	67.4	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	93.2	66.0	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	95.3	65.4	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	95.6	67.8	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094738)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094738) - continued								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	104	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097975)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	105	71.8	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3030 mg/kg	104	83.9	125
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	103	77.9	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094738)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	101	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097975)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	103	72.2	128
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4020 mg/kg	102	82.1	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	280 mg/kg	118	55.1	131
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN (QCLot: 3094738)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	91.6	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	103	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	102	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	109	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	109	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	91.1	61.2	123
EP094A: Synthetic Pyrethroids (QCLot: 3092677)								
EP094: Bioresmethrin	28434-01-07	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	70.0	130
EP094: Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	0.5 mg/kg	89.7	70.0	130
EP094: Phenothrin	26002-80-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.1	70.0	130
EP094: Lambda-cyhalothrin	68085-85-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.4	70.0	130
EP094: Permethrin	52645-53-1	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	70.0	130
EP094: Cyfluthrin	68359-37-5	0.05	mg/kg	<0.05	0.5 mg/kg	71.5	70.0	130
EP094: Cypermethrin	52315-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	73.8	70.0	130
EP094: Fenvalerate & Esfenvalerate	51630-58-1/ 66230-04-	0.05	mg/kg	<0.05	0.5 mg/kg	# 133	70.0	130
EP094: Deltamethrin & Tralomethrin	62229-77-0/ 66841-25-	0.05	mg/kg	<0.05	0.5 mg/kg	112	70.0	130
EP094: Allethrin	584-79-2	0.05	mg/kg	<0.05	0.5 mg/kg	76.9	70.0	130
EP094: Transfluthrin	118712-89-3	0.05	mg/kg	<0.05	0.5 mg/kg	83.3	70.0	130
EP094: Tetramethrin	7696-12-0	0.05	mg/kg	<0.05	0.5 mg/kg	77.5	70.0	130
EP094: Tau-fluvalinate	102851-06-9	0.05	mg/kg	<0.05	0.5 mg/kg	125	70.0	130
EP094B: Synergist (QCLot: 3092677)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP094B: Synergist (QCLot: 3092677) - continued								
EP094: Piperonyl Butoxide	63993-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	70.0	130
EP201: Carbamate Pesticides by LCMS (QCLot: 3092172)								
EP201: Oxamyl	23135-22-0	0.02	mg/kg	<0.02	0.04 mg/kg	100	73.8	122
EP201: Methomyl	16752-77-5	0.02	mg/kg	<0.02	0.04 mg/kg	107	74.9	129
EP201: 3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg	<0.02	0.04 mg/kg	104	79.5	131
EP201: Aldicarb	116-06-3	0.02	mg/kg	<0.02	0.04 mg/kg	103	82.2	138
EP201: Bendiocarb	22781-23-3	0.02	mg/kg	<0.02	0.04 mg/kg	100	76.4	138
EP201: Thiodicarb	59669-26-0	0.02	mg/kg	<0.02	0.04 mg/kg	102	75.9	129
EP201: Carbofuran	1563-66-2	0.02	mg/kg	<0.02	0.04 mg/kg	104	78.2	128
EP201: Carbaryl	63-25-2	0.02	mg/kg	<0.02	0.04 mg/kg	102	66.0	124
EP201: Methiocarb	2032-65-7	0.02	mg/kg	<0.02	0.04 mg/kg	106	70.2	144
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3106921)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	97.1	54.4	128
EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	76.8	45.5	130
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	88.3	51.7	135
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	87.8	60.0	130
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	96.8	56.8	131
EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	81.7	50.0	141
EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	92.8	68.5	131
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	90.7	50.8	141
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	86.8	40.8	126
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	78.9	57.4	139
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	82.2	38.9	137
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	91.8	48.7	129
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	87.3	49.4	106
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	95.2	53.2	128

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098572)							
EM2010198-005	TP01_2.0	EG005T: Arsenic	7440-38-2	50 mg/kg	93.6	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.6	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	91.4	79.0	121

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098572) - continued							
EM2010198-005	TP01_2.0	EG005T: Copper	7440-50-8	250 mg/kg	108	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	91.4	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	112	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	81.3	80.0	120
ED045G: Chloride by Discrete Analyser (QCLot: 3094763)							
EM2009497-005	Anonymous	ED045G: Chloride	16887-00-6	2000 mg/kg	105	93.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098571)							
EM2010198-005	TP01_2.0	EG035T: Mercury	7439-97-6	0.5 mg/kg	110	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098519)							
EM2009353-004	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	61.6	58.0	114
EM2009353-004	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	74.6	58.0	114
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098520)							
EM2010198-020	TP05_0.2	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	65.4	58.0	114
EM2010198-020	TP05_0.2	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	98.2	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098884)							
EM2010198-005	TP01_2.0	EK026SF: Total Cyanide	57-12-5	20 mg/kg	93.6	70.0	130
EK040T: Fluoride Total (QCLot: 3098002)							
EM2009353-004	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	83.2	70.0	130
EK055: Ammonia as N (QCLot: 3100767)							
EM2010198-005	TP01_2.0	EK055: Ammonia as N	7664-41-7	50 mg/kg	82.4	80.0	110
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3094766)							
EM2010198-005	TP01_2.0	EK057G: Nitrite as N (Sol.)	14797-65-0	2.5 mg/kg	104	84.0	128
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3100112)							
EM2010198-011	TP02_0.8	EK057G: Nitrite as N (Sol.)	14797-65-0	2.5 mg/kg	102	84.0	128
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3094765)							
EM2010198-005	TP01_2.0	EK059G: Nitrite + Nitrate as N (Sol.)	----	2.5 mg/kg	# Not Determined	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3100113)							
EM2010198-011	TP02_0.8	EK059G: Nitrite + Nitrate as N (Sol.)	----	2.5 mg/kg	# Not Determined	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3085172)							
EM2010198-005	TP01_2.0	EK061G: Total Kjeldahl Nitrogen as N	----	500 mg/kg	78.2	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3085171)							
EM2010198-005	TP01_2.0	EK067G: Total Phosphorus as P	----	100 mg/kg	102	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP004: Organic Matter (QCLot: 3090080)							
EM2010198-005	TP01_2.0	EP004: Organic Matter	----	2.52934 %	83.1	70.0	120
		EP004: Total Organic Carbon	----	1.46702 %	83.2	70.0	120
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3097974)							
EM2010198-007	QA101_200616	EP066: Total Polychlorinated biphenyls	----	1.18 mg/kg	103	44.0	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 3097973)							
EM2010198-005	TP01_2.0	EP068: gamma-BHC	58-89-9	0.5 mg/kg	84.2	22.0	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	87.4	18.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.1	23.0	136
		EP068: Dieldrin	60-57-1	0.5 mg/kg	95.1	42.0	136
		EP068: Endrin	72-20-8	0.5 mg/kg	89.9	23.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	70.3	20.0	133
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3097973)							
EM2010198-005	TP01_2.0	EP068: Diazinon	333-41-5	0.5 mg/kg	97.9	49.0	135
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	87.8	41.0	127
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	79.6	47.0	133
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	76.5	45.0	133
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	66.6	40.0	128
EP069: Toxaphene (QCLot: 3097977)							
EM2010198-006	TP02_0.2	EP069: Toxaphene	8001-35-2	10 mg/kg	104	70.0	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3094739)							
EM2010198-005	TP01_2.0	EP074: Benzene	71-43-2	2 mg/kg	96.6	51.0	137
		EP074: Toluene	108-88-3	2 mg/kg	98.4	59.0	141
EP074E: Halogenated Aliphatic Compounds (QCLot: 3094739)							
EM2010198-005	TP01_2.0	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	88.5	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	78.7	50.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 3094739)							
EM2010198-005	TP01_2.0	EP074: Chlorobenzene	108-90-7	2 mg/kg	95.3	65.0	133
EP075(SIM)A: Phenolic Compounds (QCLot: 3097976)							
EM2010198-013	TP03_0.2	EP075(SIM): Phenol	108-95-2	3 mg/kg	98.6	63.0	117
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	99.2	65.0	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	79.3	40.0	134
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	92.6	56.0	122
		EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	57.2	15.3	139
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097976)							
EM2010198-013	TP03_0.2	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	98.7	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	98.9	52.0	148

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094738)							
EM2010198-005	TP01_2.0	EP080: C6 - C9 Fraction	----	28 mg/kg	79.4	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097975)							
EM2010198-005	TP01_2.0	EP071: C10 - C14 Fraction	----	900 mg/kg	95.7	53.0	123
		EP071: C15 - C28 Fraction	----	3030 mg/kg	96.2	70.0	124
		EP071: C29 - C36 Fraction	----	1520 mg/kg	95.0	64.0	118
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094738)							
EM2010198-005	TP01_2.0	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	77.5	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097975)							
EM2010198-005	TP01_2.0	EP071: >C10 - C16 Fraction	----	1160 mg/kg	94.1	65.0	123
		EP071: >C16 - C34 Fraction	----	4020 mg/kg	94.8	67.0	121
		EP071: >C34 - C40 Fraction	----	280 mg/kg	99.0	44.0	126
EP080: BTEXN (QCLot: 3094738)							
EM2010198-005	TP01_2.0	EP080: Benzene	71-43-2	2 mg/kg	93.4	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	101	56.0	139
EP094A: Synthetic Pyrethroids (QCLot: 3092677)							
EM2010198-006	TP02_0.2	EP094: Bioresmethrin	28434-01-07	0.5 mg/kg	81.0	60.0	140
		EP094: Bifenthrin	82657-04-3	0.5 mg/kg	97.8	60.0	140
		EP094: Phenothrin	26002-80-2	0.5 mg/kg	90.3	60.0	140
		EP094: Lambda-cyhalothrin	68085-85-8	0.5 mg/kg	79.4	60.0	140
		EP094: Permethrin	52645-53-1	0.5 mg/kg	92.0	60.0	140
		EP094: Cyfluthrin	68359-37-5	0.5 mg/kg	79.3	60.0	140
		EP094: Cypermethrin	52315-07-8	0.5 mg/kg	80.5	60.0	140
		EP094: Fenvalerate & Esfenvalerate	51630-58-1/6 6230-04-	0.5 mg/kg	139	60.0	140
		EP094: Deltamethrin & Tralomethrin	62229-77-0/6 6841-25-	0.5 mg/kg	124	60.0	140
		EP094: Allethrin	584-79-2	0.5 mg/kg	84.2	60.0	140
		EP094: Transfluthrin	118712-89-3	0.5 mg/kg	86.8	60.0	140
		EP094: Tetramethrin	7696-12-0	0.5 mg/kg	82.8	60.0	140
		EP094: Tau-fluvalinate	102851-06-9	0.5 mg/kg	133	60.0	140
EP094B: Synergist (QCLot: 3092677)							
EM2010198-006	TP02_0.2	EP094: Piperonyl Butoxide	63993-73-7	0.5 mg/kg	86.3	60.0	140
EP201: Carbamate Pesticides by LCMS (QCLot: 3092172)							
ES2021158-017	Anonymous	EP201: Oxamyl	23135-22-0	0.04 mg/kg	99.6	74.0	152
		EP201: Methomyl	16752-77-5	0.04 mg/kg	111	75.0	145
		EP201: 3-Hydroxy Carbofuran	16655-82-6	0.04 mg/kg	109	80.0	146
		EP201: Aldicarb	116-06-3	0.04 mg/kg	104	82.0	138

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP201: Carbamate Pesticides by LCMS (QCLot: 3092172) - continued							
ES2021158-017	Anonymous	EP201: Bendiocarb	22781-23-3	0.04 mg/kg	107	76.0	142
		EP201: Thiodicarb	59669-26-0	0.04 mg/kg	92.8	76.0	148
		EP201: Carbofuran	1563-66-2	0.04 mg/kg	102	78.0	140
		EP201: Carbaryl	63-25-2	0.04 mg/kg	93.8	63.0	139
		EP201: Methiocarb	2032-65-7	0.04 mg/kg	90.0	70.0	144
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3106921)							
ES2021235-004	Anonymous	EP202: Mecoprop	93-65-2	0.1 mg/kg	86.3	60.0	140
		EP202: MCPA	94-74-6	0.1 mg/kg	80.4	57.0	143
		EP202: 2.4-D	94-75-7	0.1 mg/kg	95.2	68.0	139
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	83.3	51.0	145
		EP202: 2.4.5-T	93-76-5	0.1 mg/kg	79.3	57.0	142
		EP202: Picloram	1918-02-1	0.1 mg/kg	81.2	49.0	138
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	77.8	49.0	149

COC received at 10:35 (9)

CHAIN OF CUSTODY

ALS Laboratory (Make tick →)

CLIENT: Jacobs	TURNAROUND REQUIREMENT: ☒ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date): (Standard TAT may be longer for some tests, e.g. Ultra Trace Organics)
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 206511JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	COC SEQUENCE NUMBER (Circle): COC 1 / OF 2
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metageshar@jacobs.com; arthur.roo@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metageshar@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

FOR LABORATORY USE ONLY (Circle):
Custody Seal Intact? Yes No N/A
Free ice / Brown ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Jacob Taylor			
DATE/TIME: 16/06/2020 0800	DATE/TIME:	DATE/TIME: 18/6	DATE/TIME: 17/6 9:45

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Requested storage time for samples on HOLD to be advised via e

ALS USE — SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required). — Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	NHMRC 021 suite (P-16)	Metals (S) / TRH / BTEXN / PAHs (S-20)	Total Metals (As, Ba, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED045G)	Phenoxyacetic acid / Carbamates / Triazine Herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Fluoride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenolic (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP004)	Asbestos (presence) (EA200G)	Nutrients (N7-4S)	Soil Characterisation (P-22)	E. coli / Toxophene (EP059)		HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	TP01_0.2	16/06/2020	Soil	ICE	7			X X			X X	X				X	X	X	X	X X	X	X	X	X				
	TP01_0.5	16/06/2020	Soil	ICE	1																						X	
	TP01_0.7	16/06/2020	Soil	ICE	1																						X	
	TP01_1.5	16/06/2020	Soil	ICE	1																						X	
	TP01_2.0	16/06/2020	Soil	ICE	4			X X			X X	X					X	X	X	X			X	X				
	TP02_0.2	16/06/2020	Soil	ICE	4			X X			X					X	X	X			X		X		X			
	QA101_200616	16/06/2020	Soil	ICE	2			X X			X																	
	QA201_200616	16/06/2020	Soil	ICE	2			X X			X																	PLEASE FORWARD TO EUROFINS
	TP02_0.5	16/06/2020	Soil	ICE	1																						X	
	TP02_1.2	16/06/2020	Soil	ICE	1																						X	
	TP02_1.4	16/06/2020	Soil	ICE	1																						X	
	TP02_0.8	16/06/2020	Soil	ICE	2			X X			X						X	X					X					
	TP02_1.9	16/06/2020	Soil	ICE	1																						X	
	TP03_0.2	16/06/2020	Soil	ICE	4			X X			X X	X							X	X		X						
	TP03_0.5	16/06/2020	Soil	ICE	1																							
	TP03_0.9	16/06/2020	Soil	ICE	3			X X			X X	X							X	X								
	TP03_1.2	16/06/2020	Soil	ICE	1																						X	
	TP04_0.1	16/06/2020	Soil	ICE	2			X X			X																	

Date/Time: 18/6/20 - 4:34pm

726502

Chilled: (Yes) / No

Temp: 7.9 / 4.1 / 3.8

Correction:

Final Temp:

courier

eurofins | Environment Testing

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NATA # 1261 Site # 20794

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

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Order No.: 1574
Report #: 726502
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Jun 18, 2020 6:34 PM
Due: Jun 26, 2020
Priority: 5 Day
Contact Name: Jacob Taylor

Project Name:
Project ID: 15305100

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Arsenic	Barium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Organochlorine Pesticides	Polychlorinated Biphenyls	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																							
Brisbane Laboratory - NATA Site # 20794																							
Perth Laboratory - NATA Site # 23736																							
External Laboratory																							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																		
1	QA201_200616	Jun 16, 2020		Soil	M20-Jn31560	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

eurofins | Environment Testing

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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

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

Sample Receipt Advice

Company name:	**Jacobs Group (Australia) P/L VIC**
Contact name:	Jacob Taylor
Project ID:	15305100
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jun 18, 2020 6:34 PM
Eurofins reference:	**726502**

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:

Harry Bacalis on Phone : or by e.mail: HarryBacalis@eurofins.com

Results will be delivered electronically via e.mail to Jacob Taylor - Jacob.Taylor@jacobs.com.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

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.

Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

Attention: **Jacob Taylor**

Report **726502-S**
Project name
Project ID 15305100
Received Date Jun 18, 2020

Client Sample ID			**QA201_200616**
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Jn31560**
Date Sampled			**Jun 16, 2020**
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	82
Tetrachloro-m-xylene (surr.)	1	%	101
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1

Client Sample ID			QA201_200616
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn31560
Date Sampled			Jun 16, 2020
Test/Reference	LOR	Unit	
Polychlorinated Biphenyls			
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	82
Tetrachloro-m-xylene (surr.)	1	%	101
Heavy Metals			
Arsenic	2	mg/kg	5.8
Barium	10	mg/kg	370
Boron	10	mg/kg	36
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	65
Cobalt	5	mg/kg	21
Copper	5	mg/kg	22
Lead	5	mg/kg	18
Manganese	5	mg/kg	420
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	73
Selenium	2	mg/kg	< 2
Silver	0.2	mg/kg	< 0.2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	34
% Moisture	1	%	18

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
Organochlorine Pesticides	Melbourne	Jun 20, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Jun 20, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Heavy Metals	Melbourne	Jun 20, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Jun 18, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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NATA # 1261 Site # 20794

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NATA # 1261
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New Zealand

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Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Order No.: 1574
Report #: 726502
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Jun 18, 2020 6:34 PM
Due: Jun 26, 2020
Priority: 5 Day
Contact Name: Jacob Taylor

Project Name:
Project ID: 15305100

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Arsenic	Barium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Organochlorine Pesticides	Polychlorinated Biphenyls	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																							
Brisbane Laboratory - NATA Site # 20794																							
Perth Laboratory - NATA Site # 23736																							
External Laboratory																							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																		
1	QA201_200616	Jun 16, 2020		Soil	M20-Jn31560	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Test Counts						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****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							
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	
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							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 0.2			0.2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Organochlorine Pesticides							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlordanes - Total			%	76			70-130	Pass	
4.4'-DDD			%	128			70-130	Pass	
4.4'-DDE			%	80			70-130	Pass	
4.4'-DDT			%	76			70-130	Pass	
a-BHC			%	71			70-130	Pass	
Aldrin			%	90			70-130	Pass	
b-BHC			%	71			70-130	Pass	
d-BHC			%	75			70-130	Pass	
Dieldrin			%	85			70-130	Pass	
Endosulfan I			%	103			70-130	Pass	
Endosulfan II			%	70			70-130	Pass	
Endosulfan sulphate			%	72			70-130	Pass	
Endrin			%	90			70-130	Pass	
Endrin aldehyde			%	77			70-130	Pass	
Endrin ketone			%	71			70-130	Pass	
g-BHC (Lindane)			%	80			70-130	Pass	
Heptachlor			%	74			70-130	Pass	
Heptachlor epoxide			%	83			70-130	Pass	
Hexachlorobenzene			%	78			70-130	Pass	
Methoxychlor			%	79			70-130	Pass	
LCS - % Recovery									
Polychlorinated Biphenyls									
Aroclor-1260			%	77			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	110			80-120	Pass	
Barium			%	109			80-120	Pass	
Boron			%	114			80-120	Pass	
Cadmium			%	100			80-120	Pass	
Chromium			%	116			80-120	Pass	
Cobalt			%	119			80-120	Pass	
Copper			%	112			80-120	Pass	
Lead			%	113			80-120	Pass	
Manganese			%	115			80-120	Pass	
Molybdenum			%	111			80-120	Pass	
Nickel			%	108			80-120	Pass	
Selenium			%	111			80-120	Pass	
Silver			%	103			80-120	Pass	
Tin			%	109			80-120	Pass	
Zinc			%	107			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Jn31077	NCP	%	118			70-130	Pass	
4.4'-DDD	M20-Jn31077	NCP	%	81			70-130	Pass	
4.4'-DDE	M20-Jn31077	NCP	%	101			70-130	Pass	
4.4'-DDT	M20-Jn21929	NCP	%	71			70-130	Pass	
a-BHC	M20-Jn31077	NCP	%	121			70-130	Pass	
Aldrin	M20-Jn31077	NCP	%	92			70-130	Pass	
b-BHC	M20-Jn31077	NCP	%	121			70-130	Pass	
d-BHC	M20-Jn31077	NCP	%	92			70-130	Pass	
Dieldrin	M20-Jn31077	NCP	%	82			70-130	Pass	
Endosulfan I	M20-Jn31077	NCP	%	129			70-130	Pass	
Endosulfan II	M20-Jn31077	NCP	%	127			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	M20-Jn31077	NCP	%	105			70-130	Pass	
Endrin	M20-Jn31077	NCP	%	105			70-130	Pass	
Endrin aldehyde	M20-Jn31077	NCP	%	122			70-130	Pass	
Endrin ketone	M20-Jn31077	NCP	%	110			70-130	Pass	
g-BHC (Lindane)	M20-Jn31077	NCP	%	109			70-130	Pass	
Heptachlor	M20-Jn31077	NCP	%	91			70-130	Pass	
Heptachlor epoxide	M20-Jn31077	NCP	%	107			70-130	Pass	
Hexachlorobenzene	M20-Jn31077	NCP	%	97			70-130	Pass	
Methoxychlor	M20-Jn21929	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M20-Jn24361	NCP	%	79			70-130	Pass	
Aroclor-1260	M20-Jn24361	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn33454	NCP	%	104			75-125	Pass	
Barium	M20-Jn33454	NCP	%	105			75-125	Pass	
Boron	M20-Jn33454	NCP	%	123			75-125	Pass	
Cadmium	M20-Jn33454	NCP	%	100			75-125	Pass	
Chromium	M20-Jn33454	NCP	%	102			75-125	Pass	
Cobalt	M20-Jn33454	NCP	%	111			75-125	Pass	
Copper	M20-Jn33454	NCP	%	37			75-125	Fail	Q08
Lead	M20-Jn33729	NCP	%	50			75-125	Fail	Q08
Manganese	M20-Jn33454	NCP	%	112			75-125	Pass	
Molybdenum	M20-Jn33454	NCP	%	111			75-125	Pass	
Nickel	M20-Jn33454	NCP	%	98			75-125	Pass	
Selenium	M20-Jn33454	NCP	%	98			75-125	Pass	
Silver	M20-Jn33454	NCP	%	100			75-125	Pass	
Tin	M20-Jn33454	NCP	%	110			75-125	Pass	
Zinc	M20-Jn33729	NCP	%	51			75-125	Fail	Q08
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Jn31071	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn31071	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn33463	NCP	mg/kg	11	11	<1	30%	Pass	
Barium	M20-Jn33463	NCP	mg/kg	170	170	<1	30%	Pass	
Boron	M20-Jn33463	NCP	mg/kg	49	50	3.0	30%	Pass	
Cadmium	M20-Jn33463	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn33463	NCP	mg/kg	190	190	1.0	30%	Pass	
Cobalt	M20-Jn33463	NCP	mg/kg	14	14	2.0	30%	Pass	
Copper	M20-Jn33463	NCP	mg/kg	15	15	1.0	30%	Pass	
Lead	M20-Jn33463	NCP	mg/kg	19	19	2.0	30%	Pass	
Manganese	M20-Jn33463	NCP	mg/kg	230	230	1.0	30%	Pass	
Molybdenum	M20-Jn33463	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn33463	NCP	mg/kg	40	40	1.0	30%	Pass	
Selenium	M20-Jn33463	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn33463	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn33463	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn33463	NCP	mg/kg	44	44	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Jn31523	NCP	%	6.7	7.4	10	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
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

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

Glenn Jackson
General Manager

[redacted]

- 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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: Jacobs	TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):		
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):		
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)	COC SEQUENCE NUMBER (Circle)	
ORDER NUMBER: 1578 (Eurofins - 1574)		COC: 1 2 2 3 4 5	
PROJECT MANAGER: Kate Munro	CONTACT PH:	OF: 1 2 2 3 4 5	
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default):	JACOBS	DATE/TIME: Pm (A) 19/6/20 11-40am
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.tso@jacobs.com		DATE/TIME:	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net		19/6/20	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

SAMPLE DETAILS MATRIX SOIL S, WATER W				CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).																									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	NRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Syntheic pyrethroids (EP084)	Asbestos (presiabs) (EA200G)	Nutrients (NT-3S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	MW001_0.2	18/06/2020	Soil	ICE	1																							x	
	MW001_1.5	18/06/2020	Soil	ICE	1			X	X												X								
	MW001_2.5	18/06/2020	Soil	ICE	1																							x	
	MW001_3.5	18/06/2020	Soil	ICE	1			X	X												X								
	MW001_5.0	18/06/2020	Soil	ICE	1																							x	
	MW001_8.0	18/06/2020	Soil	ICE	1																							x	
	HA01_0.1	17/06/2020	Soil	ICE	1																							X	
	HA01_0.3	17/06/2020	Soil	ICE	1		X																						
	HA02_0.4	17/06/2020	Soil	ICE	1																							x	
	HA02_0..55	17/06/2020	Soil	ICE	1																							x	
	HA02_0.8	17/06/2020	Soil	ICE	1		X																						
	HA03_0.45	17/06/2020	Soil	ICE	1																							x	

Environmental Division
Melbourne
Work Order Reference
EM2010590

Telephone : + 61-3-8549 9600

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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CLIENT: Jacobs
OFFICE: Level 11 452 Flinders Street, Melbourne 3000
PROJECT: IS305100
ORDER NUMBER: 1578 (Eurofins - 1574)
PROJECT MANAGER: Kate Munro
SAMPLER: JT / AM
COC emailed to ALS? (YES)
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

TURNAROUND REQUIREMEN ☒ Standard TAT (List due date):
(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)

CONTACT PH:
SAMPLER MOBILE: 0427 931 093
EDD FORMAT (or default):

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

FOR LABORATORY USE ONLY (CONDITION)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS			
DATE/TIME: 19/6/20	DATE/TIME: 19/6/20 11.46	DATE/TIME:	DATE/TIME:

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Ba, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG040G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP034)	Asbestos (presabs) (EA200G)	Nutrients (NT-4S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Additional Information
	STP03_0.2	17/06/2020	Soil	ICE	1																							X	
	STP03_0.4	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP04_0.3	17/06/2020	Soil	ICE	1																							X	
	STP04_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP04_0.9	17/06/2020	Soil	ICE	1																							X	
	STP05_0.2	17/06/2020	Soil	ICE	2	X																							
	QA101_200618	17/06/2020	Soil	ICE	2	X																							
	STP05_0.6	17/06/2020	Soil	ICE	1																							X	
	STP06_0.2	17/06/2020	Soil	ICE	1																							x	
	STP06_0.5	17/06/2020	Soil	ICE	1																							x	
	STP06_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP07_0.3	17/06/2020	Soil	ICE	1																							X	
	STP07_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP08_0.4	17/06/2020	Soil	ICE	1	X																							Please advise if sample volume is insufficient

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2083 E: nowra@alsglobal.com
☐PERTH 16 Hod Way Malaga WA 6090 Ph: 08 6200 7655 E: samples.perth@alsglobal.com
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CLIENT: Jacobs
OFFICE: Level 11 452 Flinders Street, Melbourne 3000
PROJECT: IS305100
ORDER NUMBER: 1578 (Eurofins - 1574)
PROJECT MANAGER: Kate Munro
CONTACT PH:
SAMPLER: JT / AM
SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)
EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)

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

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact
Cooler Temperature (INWRG 621)
Random Sample Temperature
Cooling Method

RELINQUISHED BY: JACOBS
DATE/TIME: 19/6/20
RECEIVED BY:
DATE/TIME: 19/6/20 11:46
RELINQUISHED BY:
DATE/TIME:
RECEIVED BY:
DATE/TIME:

ALS USE ONLY — SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required). — Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	INWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/fox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (pres/abs) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP065)		HOLD	Additional Information
	STP16_0.2	18/06/2020	Soil	ICE	2	X																							
	STP17_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP18_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP19_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	STP20_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
	RB_200618	18/06/2020	Water	ICE	1		X																						
	TB_200619	19/06/2020	Soil	ICE	1									X															
				TOTAL	62	7	6	16	16	14	0	0	0	1	14	0	14	0	14	0	16	0	14	0	0	0	0	27	

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

Niki Papastergiou

From: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Sent: Friday, 19 June 2020 1:28 PM
To: COC Melbourne
Cc: Teo, Arthur; Peter Ravlic
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up
Attachments: IS305100_ALS CoC_200619_rev1.pdf

Hi,

Apologies, I have just noticed an error in the scheduled analyses.

Please see attached revised COC.

Thanks,
Jacob

From: Taylor, Jacob
Sent: Friday, 19 June 2020 1:12 PM
To: COC.Melbourne@alsglobal.com
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>; Peter Ravlic <peter.ravlic@alsglobal.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Hi sample receipt team,

Please see attached COC for sample dispatched this morning for project IS305100.

Thanks,
Jacob Taylor

From: Peter Ravlic <peter.ravlic@alsglobal.com>
Sent: Friday, 19 June 2020 8:48 AM
To: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Will do

Thanks Jacob

Regards

Peter Ravlic

Client Services – Springvale

Environmental

T +61 3 8549 9600
F +61 3 8549 9626
Peter.Ravlic@alsglobal.com
2-4 Westall Rd
Springvale Vic 3171
Australia

ALSCompass
SAMPLING Intelligence

From: Taylor, Jacob [mailto:Jacob.Taylor@jacobs.com]
Sent: Friday, 19 June 2020 7:49 AM
To: Peter Ravlic <peter.ravlic@alsglobal.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>
Subject: [EXTERNAL] - IS305100 - Sample Pick up

Hi Peter,

Can you arrange a smaller pick up (4 eskies) from 37 Haines Street, North Melbourne?

I'll be available from 10:30.
Please pass on my contact details to the courier, 0427 931 093.

Thanks,
Jacob Taylor

Get Outlook for iOS

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updated COC

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

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- ☐ WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

[redacted]

CLIENT: Jacobs	TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	COC SEQUENCE NUMBER (Circle) COC: 1 2 2 3 4 5 OF: 1 2 2 3 4 5
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS	DATE/TIME:	DATE/TIME:	DATE/TIME:
DATE/TIME: 19/6/20			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

[redacted]

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	NWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH/C6-9/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (presl/abs) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MW001_0.2	18/06/2020	Soil	ICE	1			X	X												X								
2	MW001_1.5	18/06/2020	Soil	ICE	1			X	X																			X	
3	MW001_2.5	18/06/2020	Soil	ICE	1																							X	
4	MW001_3.5	18/06/2020	Soil	ICE	1																							X	
5	MW001_5.0	18/06/2020	Soil	ICE	1																							X	
6	MW001_8.0	17/06/2020	Soil	ICE	1		X																						
7	HA01_0.1	17/06/2020	Soil	ICE	1																							X	
8	HA01_0.3	17/06/2020	Soil	ICE	1		X																						
9	HA02_0.4	17/06/2020	Soil	ICE	1																							X	
10	HA02_0..55	17/06/2020	Soil	ICE	1																							X	
11	HA02_0.8	17/06/2020	Soil	ICE	1		X																						
12	HA03_0.45																												

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 6209 7655 E: samples.perth@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 9784 9555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: Jacobs
OFFICE: Level 11 452 Flinders Street, Melbourne 3000
PROJECT: IS305100
ORDER NUMBER: 1578 (Eurofins - 1574)
PROJECT MANAGER: Kate Munro
CONTACT PH:

TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List date):
ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)

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

FOR LABORATORY USE ONLY (CIRCUMSTANCES OF RECEIPT)

SAMPLER: JT / AM
SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)
EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS			
DATE/TIME: 19/6/20	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY — SAMPLE DETAILS (MATRIX: SOIL OR WATER ONLY) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price). Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Ba, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/fox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Soh. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (prep/abs) (EA200G)	Nutrients (NT-$S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Additional Information
13	HA03_0.55	17/06/2020	Soil	ICE	1																							x
14	HA03_0.6	17/06/2020	Soil	ICE	1																							x
15	HA04_0.4	18/06/2020	Soil	ICE	1		X																					
16	HA04_0.7	18/06/2020	Soil	ICE	1																							x
17	HA05_0.4	18/06/2020	Soil	ICE	1		X																					
18	HA05_0.75	18/06/2020	Soil	ICE	1																							x
19	HA05_0.85	18/06/2020	Soil	ICE	1																							x
20	RB_200617	17/06/2020	Water	ICE	4		X																					
21	STP01_0.2	17/06/2020	Soil	ICE	1																							X
22	STP01_0.4	17/06/2020	Soil	ICE	2	X																						
23	STP02_0.3	17/06/2020	Soil	ICE	1			X	X	X				X		X		X		X								
24	STP02_0.4	17/06/2020	Soil	ICE	1																							X

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8350 0860 E: adelaide@alsglobal.com
☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5900 E: gladstone@alsglobal.com
☐MACKAY 75 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: Jacobs	TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

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

FOR LABORATORY USE ONLY (Office)
Cooler Seal (Yes) Yes No N/A
Sample Condition (Intact, Leaking, Broken) Yes No N/A
Received Sealed in Appropriate Containers Yes No
Other comments:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS			
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
19/6/20			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY — SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price). Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/fox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (pres/abs) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Additional Information: Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
25	STP03_0.2	17/06/2020	Soil	ICE	1																							X	
26	STP03_0.4	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
27	STP04_0.3	17/06/2020	Soil	ICE	1																							X	
28	STP04_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
29	STP04_0.9	17/06/2020	Soil	ICE	1																							X	
30	STP05_0.2	17/06/2020	Soil	ICE	2	X																							
QC101 31	QA101_200618 17.	17/06/2020	Soil	ICE	2	X																							
32	STP05_0.6	17/06/2020	Soil	ICE	1																							X	
33	STP06_0.2	17/06/2020	Soil	ICE	1																							x	
34	STP06_0.5	17/06/2020	Soil	ICE	1																							x	
35	STP06_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
36	STP07_0.3	17/06/2020	Soil	ICE	1																							X	
37	STP07_0.6	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
38	STP08_0.4	17/06/2020	Soil	ICE	1	X																							Please advise if sample volume is insufficient

NP (ALS) 23/6

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE 21 Dermis Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com
SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: Jacobs	TURNAROUND REQUIREMENTS: ☒ Standard TAT (List due date):		
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):		
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)	COC SEQUENCE NUMBER (Circle)	
ORDER NUMBER: 1578 (Eurofins - 1574)		COC: 1 2 2 3 4 5	
PROJECT MANAGER: Kate Munro	CONTACT PH:	OF: 1 2 2 3 4 5	
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default):	JACOBS	
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.teo@jacobs.com		DATE/TIME:	DATE/TIME:
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net		19/6/20	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com			

RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY — SAMPLE DETAILS — MATRIX: SOLID (S) WATER (W) — CONTAINER INFORMATION — ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price). Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/tox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRHBTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (pres/abs) (EA200G)	Nutrients (NT-8S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Additional Information: Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
39	STP08_0.8	17/06/2020	Soil	ICE	1																							X	
40	STP08_1.0	17/06/2020	Soil	ICE	1																							X	
41	STP09_0.4	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
42	STP10_0.6	17/06/2020	Soil	ICE	2	X																							
43	STP10_0.9	17/06/2020	Soil	ICE	1																							X	
44	STP11_0.4	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
45	STP11_0.8	17/06/2020	Soil	ICE	1																							X	
46	STP12_0.2	17/06/2020	Soil	ICE	1																							X	
47	STP12_0.7	17/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
48	STP13_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
49	STP14_0.2	18/06/2020	Soil	ICE	2	X																							
50	STP15_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0853 E: adelaide@alsglobal.com
☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 4971 9503 E: gladstone@alsglobal.com
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 6784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: Jacobs
OFFICE: Level 11 452 Flinders Street, Melbourne 3000
PROJECT: IS305100
ORDER NUMBER: 1578 (Eurofins - 1574)
PROJECT MANAGER: Kate Munro
SAMPLER: JT / AM
COC emailed to ALS? (YES)
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; arthur.leo@jacobs.com
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com

TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)
CONTACT PH:
SAMPLER MOBILE: 0427 931 093
EDD FORMAT (or default):

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

FOR LABORATORY USE ONLY (Circle)
Cooling Method: Ice Ice Bags None
Cooling Status: Intact Broken None
Free ice cubes in Esky on receipt: Yes No
Random Sample Temperature on Receipt: C
Other comments:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS			
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
19/6/20			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	IWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Be, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Se, Zn) / Mercury / Cr (VI) (EG005T / EG035T / EG048G)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/lox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfate (ED040N)	Phenoxyacetic acid / Carbamates / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Flouride (EK040T)	pH (CaCl)	Sulphate / Cl / pH (corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-24)+ VOCs (EP074)	Synthetic pyrethroids (EP094)	Asbestos (pres/abs) (EA200G)	Nutrients (NT-3S)	Soil Characterisation (P-22)	E. coli / Toxaphene (EP069)		HOLD	Additional Information
51	STP16_0.2	18/06/2020	Soil	ICE	2	X																							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
52	STP17_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
53	STP18_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
54	STP19_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
55	STP20_0.2	18/06/2020	Soil	ICE	1			X	X	X					X		X		X		X		X						
56	RB_200618	18/06/2020	Water	ICE	4		X																						
57	TB_200619	19/06/2020	Soil	ICE	1									X															
				TOTAL	62	7	7	16	16	14	0	0	0	1	14	0	14	0	14	0	16	0	14	0	0	0	0	26	

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

Extra sample,
58 MWH01 - 10.0 18/6

Ranil Weerakkody

From: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Sent: Friday, 19 June 2020 3:14 PM
To: Peter Ravlic; COC Melbourne
Cc: Teo, Arthur
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up
Attachments: IS305100_ALS CoC_200619_rev2.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Peter / sample receipt,

See attached another CoC with the analyses revised **again**.

Sorry, it is not my day.....

Have a good weekend.

Thanks,
Jacob

From: Peter Ravlic <peter.ravlic@alsglobal.com>
Sent: Friday, 19 June 2020 1:57 PM
To: Taylor, Jacob <Jacob.Taylor@jacobs.com>; COC Melbourne <COC.Melbourne@alsglobal.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Thanks Jacob

Regards

Peter Ravlic

Client Services – Springvale

Environmental

T +61 3 8549 9600
F +61 3 8549 9626
Peter.Ravlic@alsglobal.com
2-4 Westall Rd
Springvale Vic 3171
Australia

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From: Taylor, Jacob [mailto:Jacob.Taylor@jacobs.com]
Sent: Friday, 19 June 2020 1:28 PM
To: COC Melbourne <COC.Melbourne@alsglobal.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>; Peter Ravlic <peter.ravlic@alsglobal.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Hi,

Apologies, I have just noticed an error in the scheduled analyses.

Please see attached revised COC.

Thanks,
Jacob

From: Taylor, Jacob
Sent: Friday, 19 June 2020 1:12 PM
To: COC.Melbourne@alsglobal.com
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>; Peter Ravlic <peter.ravlic@alsglobal.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Hi sample receipt team,

Please see attached COC for sample dispatched this morning for project IS305100.

Thanks,
Jacob Taylor

From: Peter Ravlic <peter.ravlic@alsglobal.com>
Sent: Friday, 19 June 2020 8:48 AM
To: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>
Subject: RE: [EXTERNAL] - IS305100 - Sample Pick up

Will do

Thanks Jacob

Regards

Peter Ravlic

Client Services – Springvale

Environmental

T +61 3 8549 9600
F +61 3 8549 9626
Peter.Ravlic@alsglobal.com
2-4 Westall Rd
Springvale Vic 3171
Australia

From: Taylor, Jacob [mailto:Jacob.Taylor@jacobs.com]
Sent: Friday, 19 June 2020 7:49 AM
To: Peter Ravlic <peter.ravlic@alsglobal.com>
Cc: Teo, Arthur <Arthur.Teo@jacobs.com>
Subject: [EXTERNAL] - IS305100 - Sample Pick up

Hi Peter,

Can you arrange a smaller pick up (4 eskies) from 37 Haines Street, North Melbourne?

I'll be available from 10:30.
Please pass on my contact details to the courier, 0427 931 093.

Thanks,
Jacob Taylor

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ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2010590**

Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: kate.munro@jacobs.com	E-mail	: peter.ravlic@alsglobal.com
Telephone	: ----	Telephone	: +6138549 9645
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: IS305100	Page	: 1 of 6
Order number	: 1578	Quote number	: EM2020SINKNI0005 (ME/473/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: ASH METAGESHA, JACOB TAYLOR		

Dates

Date Samples Received	: 19-Jun-2020 11:40	Issue Date	: 24-Jun-2020
Client Requested Due Date	: 26-Jun-2020	Scheduled Reporting Date	: **26-Jun-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 4	Temperature	: 6.2°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 58 / 31

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **EA200: As only one sample container was submitted for multiple tests, at the client's request, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

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

Method Client sample ID	Sample Container Received	Preferred Sample Container for Analysis
Asbestos Identification in Soils : EA200		
STP02_0.3	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP03_0.4	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP04_0.6	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP06_0.6	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP07_0.6	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP09_0.4	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP11_0.4	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP12_0.7	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP13_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP15_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP17_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP18_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP19_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
STP20_0.2	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag

Summary of Sample(s) and Requested Analysis

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

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

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035T (solids) Total Mercury by FIMS	SOIL - EG048G Total Hexavalent Chromium (Alkaline digestion)	SOIL - EP074 (solids) Volatile Organic Compounds	SOIL - S-24 TRH/BTEXN/PAH + Phenols
EM2010590-001	18-Jun-2020 00:00	MW001_0.2		▯	▯	▯	▯	▯	▯
EM2010590-002	18-Jun-2020 00:00	MW001_1.5		▯	▯	▯	▯	▯	▯
EM2010590-003	18-Jun-2020 00:00	MW001_2.5	▯						
EM2010590-004	18-Jun-2020 00:00	MW001_3.5	▯						
EM2010590-005	18-Jun-2020 00:00	MW001_5.0	▯						
EM2010590-006	18-Jun-2020 00:00	MW001_8.0	▯						
EM2010590-007	17-Jun-2020 00:00	HA01_0.1		▯					
EM2010590-008	17-Jun-2020 00:00	HA01_0.3	▯						
EM2010590-009	17-Jun-2020 00:00	HA02_0.4		▯					
EM2010590-010	17-Jun-2020 00:00	HA02_0.55	▯						
EM2010590-011	17-Jun-2020 00:00	HA02_0.8	▯						
EM2010590-012	17-Jun-2020 00:00	HA03_0.45		▯					

			(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035T (solids) Total Mercury by FIMS	SOIL - EG048G Total Hexavalent Chromium (Alkaline digestion)	SOIL - EP074 (solids) Volatile Organic Compounds	SOIL - S-24 TRH/BTEXN/PAH + Phenols
EM2010590-013	17-Jun-2020 00:00	HA03_0.55	▯						
EM2010590-014	17-Jun-2020 00:00	HA03_0.6	▯						
EM2010590-015	18-Jun-2020 00:00	HA04_0.4		▯					
EM2010590-016	18-Jun-2020 00:00	HA04_0.7	▯						
EM2010590-017	18-Jun-2020 00:00	HA05_0.4		▯					
EM2010590-018	18-Jun-2020 00:00	HA05_0.75	▯						
EM2010590-019	18-Jun-2020 00:00	HA05_0.85	▯						
EM2010590-021	17-Jun-2020 00:00	STP01_0.2	▯						
EM2010590-022	17-Jun-2020 00:00	STP01_0.4		▯					
EM2010590-023	17-Jun-2020 00:00	STP02_0.3		▯	▯	▯	▯	▯	▯
EM2010590-024	17-Jun-2020 00:00	STP02_0.4	▯						
EM2010590-025	17-Jun-2020 00:00	STP03_0.2	▯						
EM2010590-026	17-Jun-2020 00:00	STP03_0.4		▯	▯	▯	▯	▯	▯
EM2010590-027	17-Jun-2020 00:00	STP04_0.3	▯						
EM2010590-028	17-Jun-2020 00:00	STP04_0.6		▯	▯	▯	▯	▯	▯
EM2010590-029	17-Jun-2020 00:00	STP04_0.9	▯						
EM2010590-030	17-Jun-2020 00:00	STP05_0.2		▯					
EM2010590-031	17-Jun-2020 00:00	QA101_200617		▯					
EM2010590-032	17-Jun-2020 00:00	STP05_0.6	▯						
EM2010590-033	17-Jun-2020 00:00	STP06_0.25	▯						
EM2010590-034	17-Jun-2020 00:00	STP06_0.5	▯						
EM2010590-035	17-Jun-2020 00:00	STP06_0.6		▯	▯	▯	▯	▯	▯
EM2010590-036	17-Jun-2020 00:00	STP07_0.3	▯						
EM2010590-037	17-Jun-2020 00:00	STP07_0.6		▯	▯	▯	▯	▯	▯
EM2010590-038	17-Jun-2020 00:00	STP08_0.4		▯					
EM2010590-039	17-Jun-2020 00:00	STP08_0.8	▯						
EM2010590-040	17-Jun-2020 00:00	STP08_1.0	▯						
EM2010590-041	17-Jun-2020 00:00	STP09_0.4		▯	▯	▯	▯	▯	▯
EM2010590-042	17-Jun-2020 00:00	STP10_0.6		▯					
EM2010590-043	17-Jun-2020 00:00	STP10_0.9	▯						
EM2010590-044	17-Jun-2020 00:00	STP11_0.4		▯	▯	▯	▯	▯	▯
EM2010590-045	17-Jun-2020 00:00	STP11_0.8	▯						
EM2010590-046	17-Jun-2020 00:00	STP12_0.2	▯						
EM2010590-047	17-Jun-2020 00:00	STP12_0.7		▯	▯	▯	▯	▯	▯
EM2010590-048	18-Jun-2020 00:00	STP13_0.2		▯	▯	▯	▯	▯	▯
EM2010590-049	18-Jun-2020 00:00	STP14_0.2		▯					
EM2010590-050	18-Jun-2020 00:00	STP15_0.2		▯	▯	▯	▯	▯	▯
EM2010590-051	18-Jun-2020 00:00	STP16_0.2		▯					
EM2010590-052	18-Jun-2020 00:00	STP17_0.2		▯	▯	▯	▯	▯	▯
EM2010590-053	18-Jun-2020 00:00	STP18_0.2		▯	▯	▯	▯	▯	▯
EM2010590-054	18-Jun-2020 00:00	STP19_0.2		▯	▯	▯	▯	▯	▯

			(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035T (solids) Total Mercury by FIMS	SOIL - EG048G Total Hexavalent Chromium (Alkaline digestion)	SOIL - EP074 (solids) Volatile Organic Compounds	SOIL - S-24 TRH/BTEXN/PAH + Phenols
EM2010590-055	18-Jun-2020 00:00	STP20_0.2		▯	▯	▯	▯	▯	▯
EM2010590-057	19-Jun-2020 00:00	TB_200619		▯					
EM2010590-058	18-Jun-2020 00:00	MW001_10.0	▯						

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA001 pH (CaCl)	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EK026SF (Solids) Total Cyanide By Segmented Flow Analyser	SOIL - P-16 IWRG 621	SOIL - S-11 OC/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EM2010590-007	17-Jun-2020 00:00	HA01_0.1						▯
EM2010590-009	17-Jun-2020 00:00	HA02_0.4						▯
EM2010590-012	17-Jun-2020 00:00	HA03_0.45						▯
EM2010590-015	18-Jun-2020 00:00	HA04_0.4						▯
EM2010590-017	18-Jun-2020 00:00	HA05_0.4						▯
EM2010590-022	17-Jun-2020 00:00	STP01_0.4				▯		
EM2010590-023	17-Jun-2020 00:00	STP02_0.3	▯	▯	▯		▯	
EM2010590-026	17-Jun-2020 00:00	STP03_0.4	▯	▯	▯		▯	
EM2010590-028	17-Jun-2020 00:00	STP04_0.6	▯	▯	▯		▯	
EM2010590-030	17-Jun-2020 00:00	STP05_0.2				▯		
EM2010590-031	17-Jun-2020 00:00	QA101_200617				▯		
EM2010590-035	17-Jun-2020 00:00	STP06_0.6	▯	▯	▯		▯	
EM2010590-037	17-Jun-2020 00:00	STP07_0.6	▯	▯	▯		▯	
EM2010590-038	17-Jun-2020 00:00	STP08_0.4				▯		
EM2010590-041	17-Jun-2020 00:00	STP09_0.4	▯	▯	▯		▯	
EM2010590-042	17-Jun-2020 00:00	STP10_0.6				▯		
EM2010590-044	17-Jun-2020 00:00	STP11_0.4	▯	▯	▯		▯	
EM2010590-047	17-Jun-2020 00:00	STP12_0.7	▯	▯	▯		▯	
EM2010590-048	18-Jun-2020 00:00	STP13_0.2	▯	▯	▯		▯	
EM2010590-049	18-Jun-2020 00:00	STP14_0.2				▯		
EM2010590-050	18-Jun-2020 00:00	STP15_0.2	▯	▯	▯		▯	
EM2010590-051	18-Jun-2020 00:00	STP16_0.2				▯		
EM2010590-052	18-Jun-2020 00:00	STP17_0.2	▯	▯	▯		▯	
EM2010590-053	18-Jun-2020 00:00	STP18_0.2	▯	▯	▯		▯	
EM2010590-054	18-Jun-2020 00:00	STP19_0.2	▯	▯	▯		▯	
EM2010590-055	18-Jun-2020 00:00	STP20_0.2	▯	▯	▯		▯	

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - ED040N Calcium Phosphate Extractable Sulfate	SOIL - S-18 TRH(C6-C9)/BTEXN
EM2010590-023	17-Jun-2020 00:00	STP02_0.3	▯	
EM2010590-026	17-Jun-2020 00:00	STP03_0.4	▯	
EM2010590-028	17-Jun-2020 00:00	STP04_0.6	▯	
EM2010590-035	17-Jun-2020 00:00	STP06_0.6	▯	
EM2010590-037	17-Jun-2020 00:00	STP07_0.6	▯	
EM2010590-041	17-Jun-2020 00:00	STP09_0.4	▯	
EM2010590-044	17-Jun-2020 00:00	STP11_0.4	▯	
EM2010590-047	17-Jun-2020 00:00	STP12_0.7	▯	
EM2010590-048	18-Jun-2020 00:00	STP13_0.2	▯	
EM2010590-050	18-Jun-2020 00:00	STP15_0.2	▯	
EM2010590-052	18-Jun-2020 00:00	STP17_0.2	▯	
EM2010590-053	18-Jun-2020 00:00	STP18_0.2	▯	
EM2010590-054	18-Jun-2020 00:00	STP19_0.2	▯	
EM2010590-055	18-Jun-2020 00:00	STP20_0.2	▯	
EM2010590-057	19-Jun-2020 00:00	TB_200619		▯

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - W-26T TRH/BTEXN/PAH/Total 8 Metals
EM2010590-020	17-Jun-2020 00:00	RB_200617	▯
EM2010590-056	18-Jun-2020 00:00	RB_200618	▯

Proactive Holding Time Report

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

Requested Deliverables

ARTHUR TEO

- *AU Certificate of Analysis - NATA (COA)	Email	arthur.teo@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	arthur.teo@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	arthur.teo@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	arthur.teo@jacobs.com
- Chain of Custody (CoC) (COC)	Email	arthur.teo@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	arthur.teo@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	arthur.teo@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	arthur.teo@jacobs.com

ASH METAGESHA

- *AU Certificate of Analysis - NATA (COA)	Email	ash.metagesha@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ash.metagesha@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ash.metagesha@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ash.metagesha@jacobs.com
- Chain of Custody (CoC) (COC)	Email	ash.metagesha@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	ash.metagesha@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	ash.metagesha@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	ash.metagesha@jacobs.com

ESDAT LSPECS

- EDI Format - ESDAT (ESDAT)	Email	labresults@jacobs.com

JACOB TAYLOR

- *AU Certificate of Analysis - NATA (COA)	Email	Jacob.Taylor@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Jacob.Taylor@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Jacob.Taylor@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Jacob.Taylor@jacobs.com
- A4 - AU Tax Invoice (INV)	Email	Jacob.Taylor@jacobs.com
- Chain of Custody (CoC) (COC)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	Jacob.Taylor@jacobs.com
- EPA Waste Classification & Categorisation Guideline Report (COA_GL_EPA_WASTE)	Email	Jacob.Taylor@jacobs.com

JACOBS RESULTS

- EDI Format - ESDAT (ESDAT)	Email	jacobs.labresults@esdat.net

KATE MUNRO

- A4 - AU Tax Invoice (INV)	Email	kate.munro@jacobs.com

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2010590**	Page	: 1 of 63
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 19-Jun-2020 11:40
Order number	: 1578	Date Analysis Commenced	: 23-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020 16:30
Sampler	: ASH METAGESHA, JACOB TAYLOR		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 58		
No. of samples analysed	: 31		

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

This Certificate of Analysis contains the following information:

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

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Bronwyn Sheen	Assistant Laboratory Manager	Melbourne Organics, Springvale, VIC
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Vanessa Phung	Team Leader - Asbestos	Melbourne Asbestos, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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

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

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

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

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

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

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

- EG048G: EM2010516 #32 Poor insoluble matrix recovery for Hexavalent Chromium due to sample matrix. Confirmed by re-analysis.
- EG048G: EM2010590 #23 Poor insoluble matrix recovery for Hexavalent Chromium due to sample matrix. Confirmed by re-analysis.
- pH analysis is done under non-stirring condition.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EG035T: EM2010590 #28 Poor matrix spike recovery for total mercury due to sample matrix.
- **EA200: As only one sample container was submitted for multiple tests, at the client's request, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW001_0.2	MW001_1.5	HA01_0.1	HA02_0.4	HA03_0.45
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-001	EM2010590-002	EM2010590-007	EM2010590-009	EM2010590-012
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.8	18.4	27.2	19.5	13.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	6
Beryllium	7440-41-7	1	mg/kg	<1	<1	----	----	----
Boron	7440-42-8	50	mg/kg	<50	<50	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	60	57	66	66	49
Cobalt	7440-48-4	2	mg/kg	24	22	----	----	----
Copper	7440-50-8	5	mg/kg	20	23	18	20	24
Lead	7439-92-1	5	mg/kg	<5	<5	10	<5	<5
Manganese	7439-96-5	5	mg/kg	444	472	----	----	----
Molybdenum	7439-98-7	2	mg/kg	<2	<2	----	----	----
Nickel	7440-02-0	2	mg/kg	74	94	48	64	66
Selenium	7782-49-2	5	mg/kg	<5	<5	----	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	----	----	----
Tin	7440-31-5	5	mg/kg	<5	<5	----	----	----
Zinc	7440-66-6	5	mg/kg	30	23	17	35	30
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW001_0.2	MW001_1.5	HA01_0.1	HA02_0.4	HA03_0.45
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-001	EM2010590-002	EM2010590-007	EM2010590-009	EM2010590-012
				Result	Result	Result	Result	Result
EP074B: Oxygenated Compounds - Continued								
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW001_0.2	MW001_1.5	HA01_0.1	HA02_0.4	HA03_0.45
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-001	EM2010590-002	EM2010590-007	EM2010590-009	EM2010590-012
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW001_0.2	MW001_1.5	HA01_0.1	HA02_0.4	HA03_0.45
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-001	EM2010590-002	EM2010590-007	EM2010590-009	EM2010590-012
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW001_0.2	MW001_1.5	HA01_0.1	HA02_0.4	HA03_0.45
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-001	EM2010590-002	EM2010590-007	EM2010590-009	EM2010590-012
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	90.8	83.0	----	----	----
Toluene-D8	2037-26-5	0.5	%	98.8	93.1	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	102	98.6	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	101	97.3	104	102	99.1
2-Chlorophenol-D4	93951-73-6	0.5	%	96.6	93.2	99.8	98.0	94.9
2.4.6-Tribromophenol	118-79-6	0.5	%	90.1	85.4	93.8	90.9	87.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	108	106	113	110	108
Anthracene-d10	1719-06-8	0.5	%	106	103	111	108	105
4-Terphenyl-d14	1718-51-0	0.5	%	109	106	113	111	108
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	87.2	79.7	81.1	70.6	71.4
Toluene-D8	2037-26-5	0.2	%	94.2	88.8	104	77.6	73.8
4-Bromofluorobenzene	460-00-4	0.2	%	114	111	122	112	112

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	----	8.4	7.5	8.5
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	17.8	20.1	18.9	17.0	16.5
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	----	----	----	No	No
Asbestos Type	1332-21-4	-	--	----	----	----	-	-
Sample weight (dry)	----	0.01	g	----	----	----	39.1	43.1
APPROVED IDENTIFIER:	----	-	--	----	----	----	V.PHUNG	V.PHUNG
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	No
Organic Fibre	----	0.1	g/kg	----	----	----	Yes	No
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	----	----	----	130	520
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	8	<5	<5	6
Beryllium	7440-41-7	1	mg/kg	----	----	----	<1	<1
Boron	7440-42-8	50	mg/kg	----	----	----	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	59	54	----	48	49
Cobalt	7440-48-4	2	mg/kg	----	----	----	19	21
Copper	7440-50-8	5	mg/kg	18	30	22	16	27
Lead	7439-92-1	5	mg/kg	<5	<5	<5	9	<5
Manganese	7439-96-5	5	mg/kg	----	----	----	410	419
Molybdenum	7439-98-7	2	mg/kg	----	----	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	58	98	73	44	76
Selenium	7782-49-2	5	mg/kg	----	----	<5	<5	<5
Silver	7440-22-4	2	mg/kg	----	----	<2	<2	<2
Tin	7440-31-5	5	mg/kg	----	----	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	23	36	34	23	33
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	----	----	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EK026SF: Total CN by Segmented Flow Analyser - Continued								
Total Cyanide	57-12-5	1	mg/kg	----	----	<1	<1	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	----	----	380	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	----	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Benzene	71-43-2	0.2	mg/kg	----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	----	----	----	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	----	----	<0.2	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	----	<0.5	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	----	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	----	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	----	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	----	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	----	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	----	----	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	----	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	----	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	----	<5	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	----	<5	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	----	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	<0.5	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	<5	<5
Chloromethane	74-87-3	5	mg/kg	----	----	----	<5	<5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	<5	<5
Bromomethane	74-83-9	5	mg/kg	----	----	----	<5	<5
Chloroethane	75-00-3	5	mg/kg	----	----	----	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	----	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	----	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	----	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	----	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	----	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	----	----	----	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	----	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	----	<0.5	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	----	<0.5	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	----	<0.5	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	<0.5	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	----	----	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	----	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	----	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	----	----	----	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	----	----	<1	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.02	mg/kg	----	----	<0.02	----	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg	----	----	<0.01	----	----
Methylene chloride	75-09-2	0.4	mg/kg	----	----	<0.4	----	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	----	----	<0.02	----	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	----	----	<0.01	----	----
Chloroform	67-66-3	0.02	mg/kg	----	----	<0.02	----	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	----	----	<0.01	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	----	----	<0.01	----	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg	----	----	<0.02	----	----
Trichloroethene	79-01-6	0.02	mg/kg	----	----	<0.02	----	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	----	----	<0.04	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg	----	----	<0.02	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	----	----	<0.01	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	----	----	<0.02	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	----	----	<0.02	----	----
Chlorobenzene	108-90-7	0.02	mg/kg	----	----	<0.02	----	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	----	----	<0.02	----	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	----	----	<0.02	----	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	----	----	<0.01	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	----	----	<0.01	----	----
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	----	----	<0.01	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	----	----	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	----	----	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	----	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	----	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	----	----	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	----	----	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	----	----	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	----	----	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	----	----	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	----	----	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	----	----	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	----	----	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	**1.2**	**1.2**
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.03	mg/kg	----	----	<0.03	----	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg	----	----	<0.03	----	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg	----	----	<0.03	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	----	----	<0.03	----	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	----	----	<0.05	----	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	----	----	<0.05	----	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	----	----	<0.03	----	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	----	----	<0.05	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	----	----	<0.03	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	----	----	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	----	----	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	----	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	----	----	<1	----	----
2.4-Dimethylphenol	105-67-9	1	mg/kg	----	----	<1	----	----
2.4-Dinitrophenol	51-28-5	5	mg/kg	----	----	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	----	----	<5	----	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	----	----	<5	----	----
Dinoseb	88-85-7	5	mg/kg	----	----	<5	----	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	----	----	<5	----	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	----	----	<1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	----	----	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	----	----	<0.03	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	----	----	<0.03	----	----
beta-BHC	319-85-7	0.03	mg/kg	----	----	<0.03	----	----
gamma-BHC	58-89-9	0.03	mg/kg	----	----	<0.03	----	----
delta-BHC	319-86-8	0.03	mg/kg	----	----	<0.03	----	----
Heptachlor	76-44-8	0.03	mg/kg	----	----	<0.03	----	----
Aldrin	309-00-2	0.03	mg/kg	----	----	<0.03	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	----	----	<0.03	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	----	----	<0.03	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	----	----	<0.03	----	----
Endosulfan 1	959-98-8	0.03	mg/kg	----	----	<0.03	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.03	mg/kg	----	----	<0.03	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg	----	----	<0.03	----	----
Endrin	72-20-8	0.03	mg/kg	----	----	<0.03	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg	----	----	<0.03	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg	----	----	<0.03	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.03	mg/kg	----	----	<0.03	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg	----	----	<0.03	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	----	----	<0.03	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	----	----
^ Chlordane	57-74-9	0.03	mg/kg	----	----	<0.03	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	----	----	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	<10	<10

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	<50	<50
C10 - C14 Fraction	----	50	mg/kg	----	----	<50	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	<10	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C15 - C28 Fraction	----	100	mg/kg	----	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	<50	<50
>C10 - C16 Fraction	----	50	mg/kg	----	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C16 - C34 Fraction	----	100	mg/kg	----	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	<50	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	<10	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	87.2	----	----
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	93.0	96.6
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	94.4	101
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	95.7	89.1
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	77.4	81.0
Toluene-D8	2037-26-5	0.5	%	----	----	----	77.2	82.8
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	83.1	87.2
EP074S: VOC Surrogates (Ultra-Trace)								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	72.6	----	----
Toluene-D8	2037-26-5	0.1	%	----	----	62.4	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	72.7	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	102	96.1	----	107	99.0
2-Chlorophenol-D4	93951-73-6	0.5	%	96.5	91.5	----	103	98.3
2.4.6-Tribromophenol	118-79-6	0.5	%	87.6	78.4	----	91.8	86.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	108	104	----	108	104
Anthracene-d10	1719-06-8	0.5	%	108	103	----	103	102
4-Terphenyl-d14	1718-51-0	0.5	%	110	106	----	90.4	91.0
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	----	----	95.2	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	----	----	72.9	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%	----	----	73.0	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	----	----	66.9	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%	----	----	82.7	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	----	----	89.2	----	----
Anthracene-d10	1719-06-8	0.025	%	----	----	93.8	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	HA04_0.4	HA05_0.4	STP01_0.4	STP02_0.3	STP03_0.4
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-015	EM2010590-017	EM2010590-022	EM2010590-023	EM2010590-026
				Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates (Waste Classification) - Continued								
4-Terphenyl-d14	1718-51-0	0.025	%	----	----	69.8	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	93.3	93.2	----	77.4	81.0
Toluene-D8	2037-26-5	0.2	%	91.1	84.1	----	77.2	82.8
4-Bromofluorobenzene	460-00-4	0.2	%	123	117	----	83.1	87.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.5	8.5	8.5	8.5	8.4
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	16.5	21.4	17.5	14.9	18.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	----	No	No
Asbestos Type	1332-21-4	-	--	-	----	----	-	-
Sample weight (dry)	----	0.01	g	39.3	----	----	42.0	42.0
APPROVED IDENTIFIER:	----	-	--	V.PHUNG	----	----	V.PHUNG	V.PHUNG
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	No	No
Organic Fibre	----	0.1	g/kg	No	----	----	No	No
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	520	----	----	400	750
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	8	7
Beryllium	7440-41-7	1	mg/kg	<1	----	----	<1	<1
Boron	7440-42-8	50	mg/kg	<50	----	----	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	67	----	----	53	58
Cobalt	7440-48-4	2	mg/kg	25	----	----	21	28
Copper	7440-50-8	5	mg/kg	28	20	18	26	23
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	441	----	----	675	516
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	85	83	63	85	54
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	5	mg/kg	<5	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	36	28	26	32	24
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EK026SF: Total CN by Segmented Flow Analyser - Continued								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	<1	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	----	310	280	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	<0.1	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	----	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	----	<0.2	<0.2	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	<5	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	<5	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	<5	<5
Chloromethane	74-87-3	5	mg/kg	<5	----	----	<5	<5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	----	----	<5	<5
Chloroethane	75-00-3	5	mg/kg	<5	----	----	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.02	mg/kg	----	<0.02	<0.02	----	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg	----	<0.01	<0.01	----	----
Methylene chloride	75-09-2	0.4	mg/kg	----	<0.4	<0.4	----	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	----	<0.02	<0.02	----	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	----	<0.01	<0.01	----	----
Chloroform	67-66-3	0.02	mg/kg	----	<0.02	<0.02	----	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	----	<0.01	<0.01	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	----	<0.01	<0.01	----	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg	----	<0.02	<0.02	----	----
Trichloroethene	79-01-6	0.02	mg/kg	----	<0.02	<0.02	----	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	----	<0.04	<0.04	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg	----	<0.02	<0.02	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	----	<0.01	<0.01	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	----	<0.02	<0.02	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	----	<0.02	<0.02	----	----
Chlorobenzene	108-90-7	0.02	mg/kg	----	<0.02	<0.02	----	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	----	<0.02	<0.02	----	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	----	<0.02	<0.02	----	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	----	<0.01	<0.01	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	----	<0.01	<0.01	----	----
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	----	<0.01	<0.01	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	----	**1.2**	**1.2**
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.03	mg/kg	----	<0.03	<0.03	----	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg	----	<0.03	<0.03	----	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg	----	<0.03	<0.03	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	----	<0.03	<0.03	----	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	----	<0.05	<0.05	----	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	----	<0.05	<0.05	----	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	----	<0.03	<0.03	----	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	----	<0.05	<0.05	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg	----	<0.2	<0.2	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	----	<0.03	<0.03	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	----	<1	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	----	<1	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	----	<1	<1	----	----
2.4-Dimethylphenol	105-67-9	1	mg/kg	----	<1	<1	----	----
2.4-Dinitrophenol	51-28-5	5	mg/kg	----	<5	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	----	<5	<5	----	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	----	<5	<5	----	----
Dinoseb	88-85-7	5	mg/kg	----	<5	<5	----	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	----	<5	<5	----	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	----	<1	<1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	----	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	**1.2**	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	----	<0.03	<0.03	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	----	<0.03	<0.03	----	----
beta-BHC	319-85-7	0.03	mg/kg	----	<0.03	<0.03	----	----
gamma-BHC	58-89-9	0.03	mg/kg	----	<0.03	<0.03	----	----
delta-BHC	319-86-8	0.03	mg/kg	----	<0.03	<0.03	----	----
Heptachlor	76-44-8	0.03	mg/kg	----	<0.03	<0.03	----	----
Aldrin	309-00-2	0.03	mg/kg	----	<0.03	<0.03	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	----	<0.03	<0.03	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	----	<0.03	<0.03	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	----	<0.03	<0.03	----	----
Endosulfan 1	959-98-8	0.03	mg/kg	----	<0.03	<0.03	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.03	mg/kg	----	<0.03	<0.03	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg	----	<0.03	<0.03	----	----
Endrin	72-20-8	0.03	mg/kg	----	<0.03	<0.03	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg	----	<0.03	<0.03	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg	----	<0.03	<0.03	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	----	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.03	mg/kg	----	<0.03	<0.03	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg	----	<0.03	<0.03	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	----	<0.03	<0.03	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	<0.05	----	----
^ Chlordane	57-74-9	0.03	mg/kg	----	<0.03	<0.03	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	----	<0.03	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	----	<10	<10

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	----	<50	<50
C10 - C14 Fraction	----	50	mg/kg	----	<50	<50	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	----	<100	<100
C15 - C28 Fraction	----	100	mg/kg	----	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	<50	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	----	----	<50	<50
>C10 - C16 Fraction	----	50	mg/kg	----	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	----	<100	<100
>C16 - C34 Fraction	----	100	mg/kg	----	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	<50	<50
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<50	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	<10	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	<0.2	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	100	92.1	----	----
Decachlorobiphenyl	2051-24-3	0.1	%	91.3	----	----	93.5	94.8
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	94.7	----	----	97.2	98.9
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	61.2	----	----	62.7	66.9
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	81.3	----	----	83.9	76.5
Toluene-D8	2037-26-5	0.5	%	79.0	----	----	86.8	79.9
4-Bromofluorobenzene	460-00-4	0.5	%	77.9	----	----	89.3	84.5
EP074S: VOC Surrogates (Ultra-Trace)								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	73.5	82.5	----	----
Toluene-D8	2037-26-5	0.1	%	----	62.0	69.4	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	73.8	81.1	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	98.8	----	----	95.4	100.0
2-Chlorophenol-D4	93951-73-6	0.5	%	97.7	----	----	96.6	99.9
2.4.6-Tribromophenol	118-79-6	0.5	%	82.2	----	----	79.8	83.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	103	----	----	103	106
Anthracene-d10	1719-06-8	0.5	%	100	----	----	100	103
4-Terphenyl-d14	1718-51-0	0.5	%	90.2	----	----	90.1	92.9
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	----	110	101	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	----	104	94.6	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%	----	82.0	69.4	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	----	93.6	89.0	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%	----	93.0	84.1	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	----	103	91.2	----	----
Anthracene-d10	1719-06-8	0.025	%	----	105	94.9	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP04_0.6	STP05_0.2	QA101_200617	STP06_0.6	STP07_0.6
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-028	EM2010590-030	EM2010590-031	EM2010590-035	EM2010590-037
				Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates (Waste Classification) - Continued								
4-Terphenyl-d14	1718-51-0	0.025	%	----	106	93.7	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	81.3	----	----	83.9	76.5
Toluene-D8	2037-26-5	0.2	%	79.0	----	----	86.8	79.9
4-Bromofluorobenzene	460-00-4	0.2	%	77.9	----	----	89.3	84.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.4	8.6	8.4	8.2	8.6
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	15.5	12.4	18.1	15.2	14.7
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	----	No	----	No	No
Asbestos Type	1332-21-4	-	--	----	-	----	-	-
Sample weight (dry)	----	0.01	g	----	43.5	----	41.2	44.6
APPROVED IDENTIFIER:	----	-	--	----	V.PHUNG	----	V.PHUNG	V.PHUNG
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	No	No
Organic Fibre	----	0.1	g/kg	----	No	----	Yes	No
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	----	380	----	430	320
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Beryllium	7440-41-7	1	mg/kg	----	<1	----	<1	1
Boron	7440-42-8	50	mg/kg	----	<50	----	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	46	----	61	52
Cobalt	7440-48-4	2	mg/kg	----	33	----	27	37
Copper	7440-50-8	5	mg/kg	19	35	33	29	38
Lead	7439-92-1	5	mg/kg	7	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	----	501	----	403	405
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	52	126	100	94	123
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	5	mg/kg	<5	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	22	51	46	40	51
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EK026SF: Total CN by Segmented Flow Analyser - Continued								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	<1	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	**170**	----	**260**	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	----
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Styrene	100-42-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Styrene	100-42-5	0.5	mg/kg	<0.5	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	<0.2	----	<0.2	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	<5	----	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	<5	----	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	<5	----	<5	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	<5	----	<5	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	<5	----	<5	<5
Chloromethane	74-87-3	5	mg/kg	----	<5	----	<5	<5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	<5	<5
Bromomethane	74-83-9	5	mg/kg	----	<5	----	<5	<5
Chloroethane	75-00-3	5	mg/kg	----	<5	----	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	----	<5	----	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	----	<0.02	----	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	----	<0.01	----	----
Methylene chloride	75-09-2	0.4	mg/kg	<0.4	----	<0.4	----	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	----	<0.02	----	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	----	<0.01	----	----
Chloroform	67-66-3	0.02	mg/kg	<0.02	----	<0.02	----	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	----	<0.01	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	----	<0.01	----	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	----	<0.02	----	----
Trichloroethene	79-01-6	0.02	mg/kg	<0.02	----	<0.02	----	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	----	<0.04	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	----	<0.02	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	----	<0.01	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	----	<0.02	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	----	<0.02	----	----
Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	----	<0.02	----	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	----	<0.02	----	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	----	<0.02	----	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	----	<0.01	----	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	<0.01	----	<0.01	----	----
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	<0.01	----	<0.01	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	----	**1.2**	**1.2**
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	----	<0.03	----	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	----	<0.03	----	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	----	<0.03	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	----	<0.03	----	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	----	<0.05	----	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	----	<0.05	----	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	----	<0.03	----	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	----	<0.2	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	<0.03	----	<0.03	----	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	<1	----	<1	----	----
2-Methylphenol	95-48-7	1	mg/kg	<1	----	<1	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	----	----
2-Nitrophenol	88-75-5	1	mg/kg	<1	----	<1	----	----
2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	----	<1	----	----
2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	----	<5	----	----
4-Nitrophenol	100-02-7	5	mg/kg	<5	----	<5	----	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	----	<5	----	----
Dinoseb	88-85-7	5	mg/kg	<5	----	<5	----	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	----	<5	----	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	<1	----	<1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	<1.0	----	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	<0.03	----	<0.03	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	----	<0.03	----	----
beta-BHC	319-85-7	0.03	mg/kg	<0.03	----	<0.03	----	----
gamma-BHC	58-89-9	0.03	mg/kg	<0.03	----	<0.03	----	----
delta-BHC	319-86-8	0.03	mg/kg	<0.03	----	<0.03	----	----
Heptachlor	76-44-8	0.03	mg/kg	<0.03	----	<0.03	----	----
Aldrin	309-00-2	0.03	mg/kg	<0.03	----	<0.03	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	----	<0.03	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	----	<0.03	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	----	<0.03	----	----
Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	----	<0.03	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Dieldrin	60-57-1	0.03	mg/kg	<0.03	----	<0.03	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	----	<0.03	----	----
Endrin	72-20-8	0.03	mg/kg	<0.03	----	<0.03	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	----	<0.03	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	----	<0.03	----	----
4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	----	<0.05	----	----
Methoxychlor	72-43-5	0.03	mg/kg	<0.03	----	<0.03	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg	<0.03	----	<0.03	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	<0.03	----	<0.03	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	<0.05	----	----
^ Chlordane	57-74-9	0.03	mg/kg	<0.03	----	<0.03	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	<0.03	----	<0.03	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	----	<10	<10

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg	----	<50	----	<50	<50
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	----
C15 - C28 Fraction	----	100	mg/kg	----	<100	----	<100	<100
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	----	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	<50	----	<50	<50
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	----	<100	----	<100	<100
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	----	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	<50
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	----	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	----	<0.2	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	<1	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	91.9	----	91.8	----	----
Decachlorobiphenyl	2051-24-3	0.1	%	----	98.1	----	95.8	95.1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	102	----	100	98.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	61.2	----	81.6	84.7
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	83.0	----	86.3	80.4
Toluene-D8	2037-26-5	0.5	%	----	83.7	----	88.8	81.8
4-Bromofluorobenzene	460-00-4	0.5	%	----	89.1	----	92.2	84.5
EP074S: VOC Surrogates (Ultra-Trace)								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	71.0	----	71.6	----	----
Toluene-D8	2037-26-5	0.1	%	65.4	----	63.3	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	75.9	----	75.3	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	99.1	----	96.9	97.7
2-Chlorophenol-D4	93951-73-6	0.5	%	----	99.9	----	97.3	99.3
2.4.6-Tribromophenol	118-79-6	0.5	%	----	78.8	----	79.0	78.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	108	----	102	106
Anthracene-d10	1719-06-8	0.5	%	----	105	----	104	104
4-Terphenyl-d14	1718-51-0	0.5	%	----	94.4	----	93.0	92.2
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	103	----	82.9	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%	98.5	----	84.7	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%	65.6	----	89.8	----	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	91.1	----	85.1	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%	88.3	----	82.6	----	----
2-Fluorobiphenyl	321-60-8	0.025	%	97.1	----	92.9	----	----
Anthracene-d10	1719-06-8	0.025	%	92.8	----	89.3	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP08_0.4	STP09_0.4	STP10_0.6	STP11_0.4	STP12_0.7
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-038	EM2010590-041	EM2010590-042	EM2010590-044	EM2010590-047
				Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates (Waste Classification) - Continued								
4-Terphenyl-d14	1718-51-0	0.025	%	108	----	89.3	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	83.0	----	86.3	80.4
Toluene-D8	2037-26-5	0.2	%	----	83.7	----	88.8	81.8
4-Bromofluorobenzene	460-00-4	0.2	%	----	89.1	----	92.2	84.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.3	8.3	8.2	8.2	8.2
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	20.1	22.8	16.2	22.3	13.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	No	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	----	No	----	No
Asbestos Type	1332-21-4	-	--	-	----	-	----	-
Sample weight (dry)	----	0.01	g	41.3	----	42.8	----	38.7
APPROVED IDENTIFIER:	----	-	--	V.PHUNG	----	V.PHUNG	----	V.PHUNG
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	No	----	No
Organic Fibre	----	0.1	g/kg	No	----	No	----	No
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	660	----	430	----	570
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	7	<5	<5	<5
Beryllium	7440-41-7	1	mg/kg	<1	----	<1	----	<1
Boron	7440-42-8	50	mg/kg	<50	----	<50	----	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	51	----	54	----	44
Cobalt	7440-48-4	2	mg/kg	16	----	19	----	17
Copper	7440-50-8	5	mg/kg	21	22	23	17	23
Lead	7439-92-1	5	mg/kg	<5	6	<5	7	<5
Manganese	7439-96-5	5	mg/kg	376	----	412	----	294
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	<2	<2
Nickel	7440-02-0	2	mg/kg	61	67	66	55	63
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Silver	7440-22-4	2	mg/kg	<2	<2	<2	<2	<2
Tin	7440-31-5	5	mg/kg	<5	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	29	27	28	21	27
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EK026SF: Total CN by Segmented Flow Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EK026SF: Total CN by Segmented Flow Analyser - Continued								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	<1	<1
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	----	240	----	180	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	<0.1	----
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	<0.1	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Styrene	100-42-5	0.5	mg/kg	----	<0.5	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	<0.5	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	----	<0.2	----	<0.2	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	----	<0.5	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	<5	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	<5	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	<5	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	<5	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	<5	----	<5
Chloromethane	74-87-3	5	mg/kg	<5	----	<5	----	<5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Vinyl chloride	75-01-4	5	mg/kg	<5	----	<5	----	<5
Bromomethane	74-83-9	5	mg/kg	<5	----	<5	----	<5
Chloroethane	75-00-3	5	mg/kg	<5	----	<5	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	<5	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
EP074H: Naphthalene								
Naphthalene	91-20-3	1	mg/kg	----	<1	----	<1	----
EP074I: Volatile Halogenated Compounds								
Vinyl chloride	75-01-4	0.02	mg/kg	----	<0.02	----	<0.02	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg	----	<0.01	----	<0.01	----
Methylene chloride	75-09-2	0.4	mg/kg	----	<0.4	----	<0.4	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	----	<0.02	----	<0.02	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	----	<0.01	----	<0.01	----
Chloroform	67-66-3	0.02	mg/kg	----	<0.02	----	<0.02	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	----	<0.01	----	<0.01	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg	----	<0.01	----	<0.01	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg	----	<0.02	----	<0.02	----
Trichloroethene	79-01-6	0.02	mg/kg	----	<0.02	----	<0.02	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	----	<0.04	----	<0.04	----
Tetrachloroethene	127-18-4	0.02	mg/kg	----	<0.02	----	<0.02	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	----	<0.01	----	<0.01	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	----	<0.02	----	<0.02	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg	----	<0.02	----	<0.02	----
Chlorobenzene	108-90-7	0.02	mg/kg	----	<0.02	----	<0.02	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	----	<0.02	----	<0.02	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	----	<0.02	----	<0.02	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	----	<0.01	----	<0.01	----
^ Sum of volatile chlorinated hydrocarbons	----	0.01	mg/kg	----	<0.01	----	<0.01	----
^ Sum of other chlorinated hydrocarbons	----	0.01	mg/kg	----	<0.01	----	<0.01	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	<1	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	<2	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	**0.6**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	**1.2**	----	**1.2**
EP075A: Phenolic Compounds (Halogenated)								
2-Chlorophenol	95-57-8	0.03	mg/kg	----	<0.03	----	<0.03	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg	----	<0.03	----	<0.03	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg	----	<0.03	----	<0.03	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Halogenated) - Continued								
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	----	<0.03	----	<0.03	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	----	<0.05	----	<0.05	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	----	<0.05	----	<0.05	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	----	<0.03	----	<0.03	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Pentachlorophenol	87-86-5	0.2	mg/kg	----	<0.2	----	<0.2	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg	----	<0.03	----	<0.03	----
EP075A: Phenolic Compounds (Non-halogenated)								
Phenol	108-95-2	1	mg/kg	----	<1	----	<1	----
2-Methylphenol	95-48-7	1	mg/kg	----	<1	----	<1	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	<1	----
2-Nitrophenol	88-75-5	1	mg/kg	----	<1	----	<1	----
2.4-Dimethylphenol	105-67-9	1	mg/kg	----	<1	----	<1	----
2.4-Dinitrophenol	51-28-5	5	mg/kg	----	<5	----	<5	----
4-Nitrophenol	100-02-7	5	mg/kg	----	<5	----	<5	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	----	<5	----	<5	----
Dinoseb	88-85-7	5	mg/kg	----	<5	----	<5	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	----	<5	----	<5	----
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	----	<1	----	<1	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1.0	mg/kg	----	<1.0	----	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	<0.5	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	----	**1.2**	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	----	<0.03	----	<0.03	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	----	<0.03	----	<0.03	----
beta-BHC	319-85-7	0.03	mg/kg	----	<0.03	----	<0.03	----
gamma-BHC	58-89-9	0.03	mg/kg	----	<0.03	----	<0.03	----
delta-BHC	319-86-8	0.03	mg/kg	----	<0.03	----	<0.03	----
Heptachlor	76-44-8	0.03	mg/kg	----	<0.03	----	<0.03	----
Aldrin	309-00-2	0.03	mg/kg	----	<0.03	----	<0.03	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	----	<0.03	----	<0.03	----
cis-Chlordane	5103-71-9	0.03	mg/kg	----	<0.03	----	<0.03	----
trans-Chlordane	5103-74-2	0.03	mg/kg	----	<0.03	----	<0.03	----
Endosulfan 1	959-98-8	0.03	mg/kg	----	<0.03	----	<0.03	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.03	mg/kg	----	<0.03	----	<0.03	----
Endrin aldehyde	7421-93-4	0.03	mg/kg	----	<0.03	----	<0.03	----
Endrin	72-20-8	0.03	mg/kg	----	<0.03	----	<0.03	----
Endosulfan 2	33213-65-9	0.03	mg/kg	----	<0.03	----	<0.03	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg	----	<0.03	----	<0.03	----
4.4`-DDT	50-29-3	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.03	mg/kg	----	<0.03	----	<0.03	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg	----	<0.03	----	<0.03	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg	----	<0.03	----	<0.03	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Chlordane	57-74-9	0.03	mg/kg	----	<0.03	----	<0.03	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg	----	<0.03	----	<0.03	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	----	<10

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	----	<10	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	----	<50
C10 - C14 Fraction	----	50	mg/kg	----	<50	----	<50	----
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	----	<10	----
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	----	<100
C15 - C28 Fraction	----	100	mg/kg	----	<100	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	<10	----	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	----	<50	----	<50
>C10 - C16 Fraction	----	50	mg/kg	----	<50	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	----	<100
>C16 - C34 Fraction	----	100	mg/kg	----	<100	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	----	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	----	<50
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	----	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	----	<50	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	----	<10	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	<0.2	----	<0.2

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	<1	----	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	102	----	111	----
Decachlorobiphenyl	2051-24-3	0.1	%	93.4	----	90.3	----	96.4
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	99.4	----	95.4	----	102
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	81.9	----	82.0	----	77.9
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	76.6	----	79.6	----	87.8
Toluene-D8	2037-26-5	0.5	%	85.3	----	90.8	----	99.4
4-Bromofluorobenzene	460-00-4	0.5	%	92.1	----	95.9	----	104
EP074S: VOC Surrogates (Ultra-Trace)								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	----	75.3	----	70.2	----
Toluene-D8	2037-26-5	0.1	%	----	60.6	----	64.9	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	73.3	----	75.9	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	98.7	----	97.8	----	97.0
2-Chlorophenol-D4	93951-73-6	0.5	%	98.9	----	99.3	----	96.4
2.4.6-Tribromophenol	118-79-6	0.5	%	77.0	----	79.4	----	78.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	104	----	106	----	104
Anthracene-d10	1719-06-8	0.5	%	101	----	103	----	102
4-Terphenyl-d14	1718-51-0	0.5	%	91.0	----	93.5	----	92.3
EP075S: Acid Extractable Surrogates (Waste Classification)								
Phenol-d6	13127-88-3	0.025	%	----	82.2	----	102	----
2-Chlorophenol-D4	93951-73-6	0.025	%	----	97.9	----	106	----
2.4.6-Tribromophenol	118-79-6	0.025	%	----	87.4	----	113	----
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)								
Nitrobenzene-D5	4165-60-0	0.025	%	----	99.0	----	116	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%	----	96.3	----	113	----
2-Fluorobiphenyl	321-60-8	0.025	%	----	106	----	109	----
Anthracene-d10	1719-06-8	0.025	%	----	118	----	117	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP13_0.2	STP14_0.2	STP15_0.2	STP16_0.2	STP17_0.2
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010590-048	EM2010590-049	EM2010590-050	EM2010590-051	EM2010590-052
				Result	Result	Result	Result	Result
EP075T: Base/Neutral Extractable Surrogates (Waste Classification) - Continued								
4-Terphenyl-d14	1718-51-0	0.025	%	----	119	----	100	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	73.6	----	76.4	----	84.2
Toluene-D8	2037-26-5	0.2	%	81.4	----	86.6	----	94.7
4-Bromofluorobenzene	460-00-4	0.2	%	101	----	104	----	116

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.3	8.0	8.2	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	22.9	20.1	11.5	<1.0	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	----	----
Asbestos Type	1332-21-4	-	--	-	-	-	----	----
Sample weight (dry)	----	0.01	g	40.5	38.9	43.8	----	----
APPROVED IDENTIFIER:	----	-	--	V.PHUNG	V.PHUNG	V.PHUNG	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	----	----
Organic Fibre	----	0.1	g/kg	No	No	No	----	----
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)								
Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	300	240	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	<5	<5	----	----
Beryllium	7440-41-7	1	mg/kg	<1	1	<1	----	----
Boron	7440-42-8	50	mg/kg	<50	<50	<50	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	47	53	35	----	----
Cobalt	7440-48-4	2	mg/kg	24	18	25	----	----
Copper	7440-50-8	5	mg/kg	33	18	28	----	----
Lead	7439-92-1	5	mg/kg	<5	7	<5	----	----
Manganese	7439-96-5	5	mg/kg	434	360	565	----	----
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	----	----
Nickel	7440-02-0	2	mg/kg	99	56	83	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	<2	----	----
Tin	7440-31-5	5	mg/kg	<5	<5	<5	----	----
Zinc	7440-66-6	5	mg/kg	40	20	46	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EK026SF: Total CN by Segmented Flow Analyser								

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EK026SF: Total CN by Segmented Flow Analyser - Continued								
Total Cyanide	57-12-5	1	mg/kg	<1	<1	<1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	<5	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	<5	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	<5	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EP074E: Halogenated Aliphatic Compounds - Continued								
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EP075(SIM)A: Phenolic Compounds - Continued								
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**93.5**	**91.8**	**94.3**	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**98.4**	**96.8**	**100**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**69.5**	**82.8**	**88.9**	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	**79.4**	**71.0**	**85.0**	----	----
Toluene-D8	2037-26-5	0.5	%	**88.7**	**83.9**	**95.3**	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	**93.3**	**90.2**	**99.4**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**94.9**	**94.8**	**98.5**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**94.4**	**94.6**	**99.2**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**74.9**	**77.4**	**77.2**	----	----

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	STP18_0.2	STP19_0.2	STP20_0.2	TB_200619	----
			Client sampling date / time	18-Jun-2020 00:00	18-Jun-2020 00:00	18-Jun-2020 00:00	19-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	EM2010590-053	EM2010590-054	EM2010590-055	EM2010590-057	--------
				Result	Result	Result	Result	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	102	102	104	----	----
Anthracene-d10	1719-06-8	0.5	%	100	100	105	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	90.1	90.6	94.0	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	76.5	68.1	81.5	84.8	----
Toluene-D8	2037-26-5	0.2	%	84.6	80.0	90.8	86.1	----
4-Bromofluorobenzene	460-00-4	0.2	%	103	99.6	109	121	----

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RB_200617	RB_200618	----	----	----
			Client sampling date / time	17-Jun-2020 00:00	18-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2010590-020	EM2010590-056	--------	--------	--------
				Result	Result	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	----	----	----

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RB_200617	RB_200618	----	----	----
			Client sampling date / time	17-Jun-2020 00:00	18-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2010590-020	EM2010590-056	--------	--------	--------
				Result	Result	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	2	µg/L	<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	----	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	**26.4**	**22.4**	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	**75.9**	**66.3**	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%	**64.9**	**59.1**	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	**63.6**	**58.2**	----	----	----
Anthracene-d10	1719-06-8	1.0	%	**73.9**	**67.8**	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	**69.9**	**64.6**	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**103**	**97.1**	----	----	----
Toluene-D8	2037-26-5	2	%	**98.1**	**99.2**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	**109**	**110**	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	*Client sample ID - Client sampling date / time*	*Analytical Results*
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	STP02_0.3 - 17-Jun-2020 00:00	Brown clay like soil with organic matter.
EA200: Description	STP03_0.4 - 17-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP04_0.6 - 17-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP06_0.6 - 17-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP07_0.6 - 17-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP09_0.4 - 17-Jun-2020 00:00	Brown tan clay like soil with rock matter.
EA200: Description	STP11_0.4 - 17-Jun-2020 00:00	Brown clay like soil with rock and organic matter.
EA200: Description	STP12_0.7 - 17-Jun-2020 00:00	Brown tan clay like soil with rock matter.
EA200: Description	STP13_0.2 - 18-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP15_0.2 - 18-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP17_0.2 - 18-Jun-2020 00:00	Brown white clay like soil with rock matter.
EA200: Description	STP18_0.2 - 18-Jun-2020 00:00	Brown tan clay like soil with rock matter.
EA200: Description	STP19_0.2 - 18-Jun-2020 00:00	Brown clay like soil with rock matter.
EA200: Description	STP20_0.2 - 18-Jun-2020 00:00	Brown tan clay like soil with rock matter.

Sub-Matrix: **SOIL**

Compound	CAS Number	%	
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	38	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	33	139
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP074S: VOC Surrogates (Ultra-Trace)			
1.2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP075S: Acid Extractable Surrogates (Waste Classification)			
Phenol-d6	13127-88-3	28	134
2-Chlorophenol-D4	93951-73-6	27	123
2.4.6-Tribromophenol	118-79-6	25	149
EP075T: Base/Neutral Extractable Surrogates (Waste Classification)			
Nitrobenzene-D5	4165-60-0	29	125
1.2-Dichlorobenzene-D4	2199-69-1	31	117
2-Fluorobiphenyl	321-60-8	44	136
Anthracene-d10	1719-06-8	53	133
4-Terphenyl-d14	1718-51-0	59	141
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124

Sub-Matrix: **WATER**

Compound	CAS Number	%	

Sub-Matrix: **WATER**

Compound	CAS Number	□□□□□ □ □□□ □□□ s □	
		□□%	□□ □
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	46
2-Chlorophenol-D4	93951-73-6	23	104
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2010590**	Page	: 1 of 21
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 19-Jun-2020
Site	: ----	Issue Date	: 29-Jun-2020
Sampler	: ASH METAGESHA, JACOB TAYLOR	No. of samples received	: 58
Order number	: 1578	No. of samples analysed	: 31

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG035T: Total Recoverable Mercury by FIMS	EM2010590--028	STP04_0.6	**Mercury**	7439-97-6	117 %	76.0-116%	**Recovery greater than upper data quality objective**
EG048: Hexavalent Chromium (Alkaline Digest)	EM2010516--032	Anonymous	**Hexavalent Chromium**	18540-29-9	47.5 %	58.0-114%	**Recovery less than lower data quality objective**
EG048: Hexavalent Chromium (Alkaline Digest)	EM2010590--023	STP02_0.3	**Hexavalent Chromium**	18540-29-9	39.4 %	58.0-114%	**Recovery less than lower data quality objective**

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Matrix Spikes (MS)					
Hexavalent Chromium by Alkaline Digestion and DA Finish	4	41	9.76	10.00	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	1	21	4.76	5.00	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	5	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	1	14	7.14	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	5	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	14	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method	***Sample Date***	*Extraction / Preparation*			*Analysis*		
Container / *Client Sample ID(s)*		***Date extracted***	*Due for extraction*	*Evaluation*	***Date analysed***	*Due for analysis*	*Evaluation*

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001) STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA001) STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) HA01_0.1, HA02_0.4, HA03_0.45, STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**----**	----	----	**24-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EA055) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**----**	----	----	**25-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EA055) MW001_0.2, MW001_1.5, HA04_0.4, HA05_0.4, STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**----**	----	----	**24-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EA055) TB_200619	**19-Jun-2020**	**----**	----	----	**24-Jun-2020**	03-Jul-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Subsampled by ALS (EA200) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**----**	----	----	**24-Jun-2020**	14-Dec-2020	✓
Snap Lock Bag - Subsampled by ALS (EA200) STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**----**	----	----	**24-Jun-2020**	15-Dec-2020	✓
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM)							
Soil Glass Jar - Unpreserved (ED040N) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	14-Dec-2020	✓	**25-Jun-2020**	14-Dec-2020	✓
Soil Glass Jar - Unpreserved (ED040N) STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	15-Dec-2020	✓	**25-Jun-2020**	15-Dec-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) HA01_0.1, HA02_0.4, HA03_0.45, STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**24-Jun-2020**	14-Dec-2020	✓	**24-Jun-2020**	14-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T) MW001_0.2, MW001_1.5, HA04_0.4, HA05_0.4, STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**24-Jun-2020**	15-Dec-2020	✓	**24-Jun-2020**	15-Dec-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
HA01_0.1,	HA02_0.4,	**17-Jun-2020**	**24-Jun-2020**	15-Jul-2020	✓	**24-Jun-2020**	15-Jul-2020	✓
HA03_0.45,	STP01_0.4,							
STP02_0.3,	STP03_0.4,							
STP04_0.6,	STP05_0.2,							
QA101_200617,	STP06_0.6,							
STP07_0.6,	STP08_0.4,							
STP09_0.4,	STP10_0.6,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EG035T)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	16-Jul-2020	✓	**24-Jun-2020**	16-Jul-2020	✓
HA04_0.4,	HA05_0.4,							
STP13_0.2,	STP14_0.2,							
STP15_0.2,	STP16_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048G)								
STP01_0.4,	STP02_0.3,	**17-Jun-2020**	**25-Jun-2020**	15-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
STP03_0.4,	STP04_0.6,							
STP05_0.2,	QA101_200617,							
STP06_0.6,	STP07_0.6,							
STP08_0.4,	STP09_0.4,							
STP10_0.6,	STP11_0.4,							
STP12_0.7								
Soil Glass Jar - Unpreserved (EG048G)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**25-Jun-2020**	16-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
STP13_0.2,	STP14_0.2,							
STP15_0.2,	STP16_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK026SF: Total CN by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EK026SF) STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**24-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	08-Jul-2020	✓
Soil Glass Jar - Unpreserved (EK026SF) STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	08-Jul-2020	✓
EK040T: Fluoride Total							
Soil Glass Jar - Unpreserved (EK040T) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**25-Jun-2020**	15-Jul-2020	✓	**26-Jun-2020**	15-Jul-2020	✓
Soil Glass Jar - Unpreserved (EK040T) STP14_0.2, STP16_0.2	**18-Jun-2020**	**25-Jun-2020**	16-Jul-2020	✓	**26-Jun-2020**	16-Jul-2020	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP066) STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP068)								
STP13_0.2,	STP15_0.2,	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074A: Monocyclic Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074-UT)								
STP01_0.4,	STP05_0.2,	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
QA101_200617,	STP08_0.4,							
STP10_0.6								
Soil Glass Jar - Unpreserved (EP074-UT)								
STP14_0.2,	STP16_0.2	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**24-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074B: Oxygenated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074C: Sulfonated Compounds								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
STP02_0.3,	STP03_0.4,	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
STP04_0.6,	STP06_0.6,							
STP07_0.6,	STP09_0.4,							
STP11_0.4,	STP12_0.7							
Soil Glass Jar - Unpreserved (EP074)								
MW001_0.2,	MW001_1.5,	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**25-Jun-2020**	25-Jun-2020	✓
STP13_0.2,	STP15_0.2,							
STP17_0.2,	STP18_0.2,							
STP19_0.2,	STP20_0.2							
EP074H: Naphthalene								
Soil Glass Jar - Unpreserved (EP074-UT)								
STP01_0.4,	STP05_0.2,	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
QA101_200617,	STP08_0.4,							
STP10_0.6								
Soil Glass Jar - Unpreserved (EP074-UT)								
STP14_0.2,	STP16_0.2	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**24-Jun-2020**	25-Jun-2020	✓
EP074I: Volatile Halogenated Compounds								
Soil Glass Jar - Unpreserved (EP074-UT)								
STP01_0.4,	STP05_0.2,	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
QA101_200617,	STP08_0.4,							
STP10_0.6								
Soil Glass Jar - Unpreserved (EP074-UT)								
STP14_0.2,	STP16_0.2	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**24-Jun-2020**	25-Jun-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) MW001_0.2, MW001_1.5, STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) HA01_0.1, HA02_0.4, HA03_0.45, STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) MW001_0.2, MW001_1.5, HA04_0.4, HA05_0.4, STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP075A: Phenolic Compounds (Halogenated)							
Soil Glass Jar - Unpreserved (EP075-EM) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075-EM) STP14_0.2, STP16_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP075A: Phenolic Compounds (Non-halogenated)							
Soil Glass Jar - Unpreserved (EP075-EM) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075-EM) STP14_0.2, STP16_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075-EM) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075-EM) STP14_0.2, STP16_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075-EM) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075-EM) STP14_0.2, STP16_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA01_0.1, HA02_0.4, HA03_0.45	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP074-UT) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) HA01_0.1, HA02_0.4, HA03_0.45, STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA04_0.4, HA05_0.4	**18-Jun-2020**	**23-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP074-UT) STP14_0.2, STP16_0.2	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**24-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW001_0.2, MW001_1.5, STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP071) MW001_0.2, MW001_1.5, HA04_0.4, HA05_0.4, STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP080) TB_200619	**19-Jun-2020**	**23-Jun-2020**	03-Jul-2020	✓	**25-Jun-2020**	03-Jul-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA01_0.1, HA02_0.4, HA03_0.45	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP074-UT) STP01_0.4, STP05_0.2, QA101_200617, STP08_0.4, STP10_0.6	**17-Jun-2020**	**24-Jun-2020**	24-Jun-2020	✓	**24-Jun-2020**	24-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) HA01_0.1, HA02_0.4, HA03_0.45, STP01_0.4, STP02_0.3, STP03_0.4, STP04_0.6, STP05_0.2, QA101_200617, STP06_0.6, STP07_0.6, STP08_0.4, STP09_0.4, STP10_0.6, STP11_0.4, STP12_0.7	**17-Jun-2020**	**25-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA04_0.4, HA05_0.4	**18-Jun-2020**	**23-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP074-UT) STP14_0.2, STP16_0.2	**18-Jun-2020**	**24-Jun-2020**	25-Jun-2020	✓	**24-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW001_0.2, MW001_1.5, STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP071) MW001_0.2, MW001_1.5, HA04_0.4, HA05_0.4, STP13_0.2, STP14_0.2, STP15_0.2, STP16_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**25-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	04-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP080) TB_200619	**19-Jun-2020**	**23-Jun-2020**	03-Jul-2020	✓	**25-Jun-2020**	03-Jul-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) STP02_0.3, STP03_0.4, STP04_0.6, STP06_0.6, STP07_0.6, STP09_0.4, STP11_0.4, STP12_0.7	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA01_0.1, HA02_0.4, HA03_0.45	**17-Jun-2020**	**23-Jun-2020**	01-Jul-2020	✓	**25-Jun-2020**	01-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) HA04_0.4, HA05_0.4	**18-Jun-2020**	**23-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW001_0.2, MW001_1.5, STP13_0.2, STP15_0.2, STP17_0.2, STP18_0.2, STP19_0.2, STP20_0.2	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**25-Jun-2020**	02-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) TB_200619	**19-Jun-2020**	**23-Jun-2020**	03-Jul-2020	✓	**25-Jun-2020**	03-Jul-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T) RB_200617	**17-Jun-2020**	**23-Jun-2020**	14-Dec-2020	✓	**23-Jun-2020**	14-Dec-2020	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T) RB_200618	**18-Jun-2020**	**23-Jun-2020**	15-Dec-2020	✓	**23-Jun-2020**	15-Dec-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) RB_200617	**17-Jun-2020**	**----**	----	----	**23-Jun-2020**	15-Jul-2020	✓
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) RB_200618	**18-Jun-2020**	**----**	----	----	**23-Jun-2020**	16-Jul-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RB_200617	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
Amber Glass Bottle - Unpreserved (EP075(SIM)) RB_200618	**18-Jun-2020**	**23-Jun-2020**	25-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) RB_200617	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
Amber Glass Bottle - Unpreserved (EP071) RB_200618	**18-Jun-2020**	**23-Jun-2020**	25-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB_200617	**17-Jun-2020**	**24-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB_200618	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**24-Jun-2020**	02-Jul-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) RB_200617	**17-Jun-2020**	**23-Jun-2020**	24-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
Amber Glass Bottle - Unpreserved (EP071) RB_200618	**18-Jun-2020**	**23-Jun-2020**	25-Jun-2020	✓	**23-Jun-2020**	02-Aug-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB_200617	**17-Jun-2020**	**24-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB_200618	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**24-Jun-2020**	02-Jul-2020	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) RB_200617	**17-Jun-2020**	**24-Jun-2020**	01-Jul-2020	✓	**24-Jun-2020**	01-Jul-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) RB_200618	**18-Jun-2020**	**24-Jun-2020**	02-Jul-2020	✓	**24-Jun-2020**	02-Jul-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	5	41	12.20	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	8	69	11.59	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	3	26	11.54	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	5	46	10.87	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	3	25	12.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	3	21	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	6	50	12.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	6	41	14.63	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	26	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	21	9.52	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	50	6.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	3	41	**7.32**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	25	**8.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	**5.13**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	39	**5.13**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	37	**5.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	50	**6.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	36	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	4	41	**9.76**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB - VIC EPA 448.3 Screen	EP066-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds - Waste Classification	EP075-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate - Calcium Phosphate Soluble	ED040N	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	2	25	**8.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Fluoride	EK040T	1	21	**4.76**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	**5.13**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	39	**5.13**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	37	**5.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071-EM	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	50	**6.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	36	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds - Ultra-trace	EP074-UT	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP) - Continued							
Total Metals by ICP-MS - Suite A	EG020A-T	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	**7.14**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl2 extract	EA001	SOIL	In house: Referenced to Rayment and Lyons (2011) 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3)
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Sulfate - Calcium Phosphate Soluble	ED040N	SOIL	In house: The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulfate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 406)
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	SOIL	In house: Referenced to APHA 4500-CN C / ASTM D7511. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3)
Total Fluoride	EK040T	SOIL	(In-house) Total fluoride is determined by ion specific electrode (ISE) in a solution obtained after a Sodium Carbonate / Potassium Carbonate fusion dissolution.
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)

Analytical Methods	Method	Matrix	Method Descriptions
PCB - VIC EPA 448.3 Screen	EP066-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
TRH - Semivolatile Fraction	EP071-EM	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260D Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)
Volatile Organic Compounds - Ultra-trace	EP074-UT	SOIL	In house: Referenced to USEPA SW 846 - 8260D Extracts are analysed by Purge and Trap, Capillary GC/MS in partial SIM/Scan mode. Quantification is by comparison against an established multi-point calibration curves. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)
Volatile Organic Compounds - Ultra-trace - Summations	EP074-UT-SUM	SOIL	Summation of MAHs and VHCs
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270E. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
Semivolatile Organic Compounds - Waste Classification	EP075-EM	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 502)
SVOC - Waste Classification (Sums)	EP075-EM-SUM	SOIL	Summations for EP075 (EM variation)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260D. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260D Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
pH in soil using a 0.01M CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Higginson 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3) (Method 103)
Calcium Phosphate Extraction for Sulphate as SO4 2-	ED040NPR	SOIL	The sample is extracted with a calcium phosphate solution. The phosphate ion displaces the adsorbed sulphate while calcium ions depress the extraction of interfering S from soil organic matter. SO4 in the extract is determined by ICPAES and reported as dry weight in the original soil. This method is compliant with NEPM (2013) Schedule B(3) (Method 406)
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
Total Fluoride	EK040T-PR	SOIL	In house: Samples are fused with Sodium Carbonate / Potassium Carbonate flux.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Methanolic Extraction of Soils - Ultra-trace.	ORG16-UT	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids - VIC EPA Screen	ORG17-EM	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2010590**	Page	: 1 of 41
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 19-Jun-2020
Order number	: 1578	Date Analysis Commenced	: 23-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020
Sampler	: ASH METAGESHA, JACOB TAYLOR		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 58		
No. of samples analysed	: 31		

ilac-MRA NATA

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

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

This Quality Control Report contains the following information:

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

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

Bronwyn Sheen	Assistant Laboratory Manager	Melbourne Organics, Springvale, VIC
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General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3098572)									
EM2010198-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	56	65	14.4	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	23	20	13.3	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	76	72	5.44	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	8	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	21	24	11.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	629	551	13.1	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	30	32	6.73	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EM2010198-020	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	76	83	8.89	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	20	18	11.3	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	59	61	2.47	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	22	8.18	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3098572) - continued									
EM2010198-020	Anonymous	EG005T: Manganese	7439-96-5	5	mg/kg	635	615	3.20	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	34	0.00	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3098573)									
EM2010590-026	STP03_0.4	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	49	54	11.0	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	21	21	0.00	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	76	80	4.10	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	7	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	27	26	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	419	426	1.78	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	33	34	0.00	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EM2010590-044	STP11_0.4	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	61	62	1.70	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	27	32	18.3	0% - 50%
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	94	96	2.30	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	29	31	5.32	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	403	428	5.96	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	40	41	3.64	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 3097414)									
EM2010438-034	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.1	7.1	0.00	0% - 20%
EM2010452-005	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	5.0	5.0	0.00	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 3097415)									

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 3097415) - continued									
EM2010590-037	STP07_0.6	EA001: pH (CaCl2)	----	0.1	pH Unit	8.4	8.4	0.00	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 3100108)									
EM2010540-013	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.3	7.4	1.36	0% - 20%
EM2010590-053	STP18_0.2	EA001: pH (CaCl2)	----	0.1	pH Unit	8.3	8.2	1.21	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3098943)									
EM2010513-017	Anonymous	EA055: Moisture Content	----	0.1	%	10.0	10.0	0.00	0% - 50%
EM2010590-051	STP16_0.2	EA055: Moisture Content	----	0.1	%	22.3	22.8	2.27	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3098948)									
EM2010567-001	Anonymous	EA055: Moisture Content	----	0.1	%	20.4	21.5	5.06	0% - 20%
EM2010590-002	MW001_1.5	EA055: Moisture Content	----	0.1	%	18.4	20.6	11.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3098949)									
EM2010590-054	STP19_0.2	EA055: Moisture Content	----	0.1	%	20.1	21.2	5.61	0% - 20%
EM2010657-006	Anonymous	EA055: Moisture Content	----	0.1	%	19.4	19.4	0.00	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3102109)									
EM2010555-001	Anonymous	EA055: Moisture Content	----	0.1	%	18.8	20.4	8.01	0% - 20%
EM2010555-013	Anonymous	EA055: Moisture Content	----	0.1	%	21.6	22.0	1.89	0% - 20%
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QC Lot: 3098891)									
EM2010511-008	Anonymous	ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	80	80	0.00	No Limit
EM2010590-047	STP12_0.7	ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	320	300	7.34	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3098571)									
EM2010198-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2010198-020	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3098574)									
EM2010590-026	STP03_0.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2010590-044	STP11_0.4	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3098521)									
EM2010516-030	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010554-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3098522)									
EM2010590-022	STP01_0.4	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-041	STP09_0.4	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3098523)									
EM2010590-055	STP20_0.2	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 3098887)									
EM2010590-031	QA101_200617	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.00	No Limit
EM2010571-005	Anonymous	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.00	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 3098888)									
EM2010590-051	STP16_0.2	EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EK040T: Fluoride Total (QC Lot: 3098003)									
EM2010512-010	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	120	130	0.00	No Limit
EM2010555-008	Anonymous	EK040T: Fluoride	16984-48-8	40	mg/kg	160	180	11.5	No Limit
EK040T: Fluoride Total (QC Lot: 3098004)									
EM2010590-051	STP16_0.2	EK040T: Fluoride	16984-48-8	40	mg/kg	180	160	10.5	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3095244)									
EM2010511-049	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.5	<0.4	0.00	No Limit
EM2010555-008	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3097927)									
EM2010590-023	STP02_0.3	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2010590-052	STP17_0.2	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3097928)									
EM2010590-023	STP02_0.3	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EM2010590-052	STP17_0.2	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3097928) - continued									
EM2010590-052	STP17_0.2	EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010511-051	Anonymous	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3097848)									
EM2010511-049	Anonymous	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3097848) - continued									
EM2010511-049	Anonymous	EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010555-015	Anonymous	EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-054	STP19_0.2	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EM2010511-051	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074B: Oxygenated Compounds (QC Lot: 3097855) - continued									
EM2010555-005	Anonymous	EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EM2010590-054	STP19_0.2	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010511-051	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-054	STP19_0.2	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010511-051	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-054	STP19_0.2	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3095126) - continued									
EM2010314-003	Anonymous	EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EM2010511-051	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3095126) - continued									
EM2010511-051	Anonymous	EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3097855) - continued									
EM2010590-054	STP19_0.2	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010511-051	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074F: Halogenated Aromatic Compounds (QC Lot: 3095126) - continued									
EM2010511-051	Anonymous	EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-054	STP19_0.2	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3095126)									
EM2010314-003	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010511-051	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3097855)									
EM2010555-005	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074G: Trihalomethanes (QC Lot: 3097855) - continued									
EM2010590-054	STP19_0.2	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074H: Naphthalene (QC Lot: 3097848)									
EM2010511-049	Anonymous	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EM2010555-015	Anonymous	EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP074I: Volatile Halogenated Compounds (QC Lot: 3097848)									
EM2010511-049	Anonymous	EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	<0.04	0.00	No Limit
		EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	<0.4	0.00	No Limit
EM2010555-015	Anonymous	EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	<0.01	0.00	No Limit
		EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074I: Volatile Halogenated Compounds (QC Lot: 3097848) - continued									
EM2010555-015	Anonymous	EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	<0.04	0.00	No Limit
		EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	<0.4	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3097925)									
EM2010590-023	STP02_0.3	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EM2010590-052	STP17_0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3097932)									
EM2010590-001	MW001_0.2	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 3097932) - continued									
EM2010590-001	MW001_0.2	EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3097925)									
EM2010590-023	STP02_0.3	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM2010590-052	STP17_0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3097932)									

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3097932) - continued									
EM2010590-001	MW001_0.2	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075A: Phenolic Compounds (Halogenated) (QC Lot: 3095242)									
EM2010511-049	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.29	<0.28	4.57	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.3	<0.3	0.00	No Limit
EM2010555-008	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 3095242)									
EM2010511-049	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 3095242) - continued									
EM2010511-049	Anonymous	EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<6	<6	0.00	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<6	<6	0.00	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<6	<6	0.00	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<6	<6	0.00	No Limit
		EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<6	<6	0.00	No Limit
EM2010555-008	Anonymous	EP075-EM: Phenol	108-95-2	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	<1	0.00	No Limit
		EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	<5	0.00	No Limit
		EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	<5	0.00	No Limit
		EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	<5	0.00	No Limit
		EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	<5	0.00	No Limit
		EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	<5	0.00	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3095242)									
EM2010511-049	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	2.9	1.3	78.4	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	1.0	<0.5	64.7	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	3.9	1.7	77.6	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	4.0	1.8	76.7	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	1.6	0.7	75.5	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	1.4	0.6	84.3	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.7	0.6	91.7	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.8	<0.5	43.6	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	1.0	<0.5	69.8	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	2.4	<1.0	84.1	No Limit
EM2010555-008	Anonymous	EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3095242) - continued									
EM2010555-008	Anonymous	EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	<1.0	0.00	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3095242)									
EM2010511-049	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.15	<0.14	0.00	No Limit
		EP075-EM: 4.4`-DDT	50-29-3	0.05	mg/kg	<0.15	<0.14	0.00	No Limit
EM2010555-008	Anonymous	EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	<0.03	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075I: Organochlorine Pesticides (QC Lot: 3095242) - continued									
EM2010555-008	Anonymous	EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	<0.03	0.00	No Limit
		EP075-EM: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP075-EM: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP075-EM: 4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3095108)									
EM2010509-004	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010509-013	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3095125)									
EM2010314-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010511-051	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3095243)									
EM2010511-049	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	410	390	6.01	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	870	1080	21.1	0% - 50%
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010555-008	Anonymous	EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097848)									
EM2010511-049	Anonymous	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010555-015	Anonymous	EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097856)									
EM2010555-005	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010590-054	STP19_0.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097926)									
EM2010590-023	STP02_0.3	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010590-052	STP17_0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097926) - continued									
EM2010590-052	STP17_0.2	EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3097931)									
EM2010555-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	440	490	10.7	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	300	370	21.4	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	60	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	740	920	21.7	0% - 50%
EM2010590-001	MW001_0.2	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3095108)									
EM2010509-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2010509-013	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3095125)									
EM2010314-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2010511-051	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3095243)									
EM2010511-049	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	870	990	12.9	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	1190	1410	17.3	0% - 50%
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010555-008	Anonymous	EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097848)									
EM2010511-049	Anonymous	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	0.00	No Limit
EM2010555-015	Anonymous	EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
		EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097856)									
EM2010555-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2010590-054	STP19_0.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097926)									
EM2010590-023	STP02_0.3	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EM2010590-052	STP17_0.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097926) - continued									
EM2010590-052	STP17_0.2	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3097931)									
EM2010555-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	640	740	14.6	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	170	220	24.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	60	70	26.8	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	870	1030	16.8	0% - 20%
EM2010590-001	MW001_0.2	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 3095108)									
EM2010509-004	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EM2010509-013	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 3095125)									
EM2010314-003	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EM2010511-051	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080: BTEXN (QC Lot: 3095125) - continued									
EM2010511-051	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 3097856)									
EM2010555-005	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EM2010590-054	STP19_0.2	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG020T: Total Metals by ICP-MS (QC Lot: 3095227)									
EM2010408-013	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.004	0.004	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.004	0.005	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.023	0.025	5.57	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.082	0.092	10.6	0% - 50%
EM2010541-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.007	0.006	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.012	0.013	8.67	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3095460)									
EM2010349-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EM2010599-004	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3095344)									
EM2010591-085	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.00	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3095344) - continued									
EM2010591-085	Anonymous	EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3096856)									
EM2010512-039	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3095344)									
EM2010591-085	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3096856)									
EM2010512-039	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 3096856)									
EM2010512-039	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098572)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	105	78.5	107
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	111	85.4	114
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	124	84.4	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	97.2	76.2	108
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	94.6	77.7	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	99.3	78.1	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	95.5	78.1	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	99.0	78.4	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	105	80.6	110
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	90.5	78.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	102	79.9	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	103	92.0	110
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	80.9	80.0	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	88.7	78.4	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	96.7	79.1	110
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098573)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	102	78.5	107
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	108	85.4	114
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	120	84.4	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	93.8	76.2	108
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	92.4	77.7	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	96.8	78.1	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	95.0	78.1	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	95.4	78.4	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	102	80.6	110
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	87.4	78.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	99.8	79.9	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	103	92.0	110
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	80.2	80.0	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	86.2	78.4	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	92.4	79.1	110
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QCLot: 3098891)								
ED040N: Sulfate as SO4 2-	14808-79-8	50	mg/kg	<50	3000 mg/kg	107	86.1	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098571)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098571) - continued								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	103	76.9	110
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098574)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	104	76.9	110
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098521)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	75.5	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098522)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	94.5	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098523)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	84.6	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098887)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	99.2	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098888)								
EK026SF: Total Cyanide	57-12-5	1	mg/kg	<1	20 mg/kg	88.9	70.0	130
EK040T: Fluoride Total (QCLot: 3098003)								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	91.5	75.2	110
EK040T: Fluoride Total (QCLot: 3098004)								
EK040T: Fluoride	16984-48-8	40	mg/kg	<40	400 mg/kg	97.0	75.2	110
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3095244)								
EP066-EM: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	90.3	70.8	136
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3097927)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	98.6	63.2	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 3097928)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	74.2	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	65.1	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	71.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	71.1	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	64.8	128
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	73.0	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	72.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3097928) - continued								
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.5	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	55.8	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	56.2	55.5	132
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3095126)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	75.1	69.8	115
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	73.8	66.5	114
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	72.9	56.8	107
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	82.1	61.2	106
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	77.1	58.4	109
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	82.3	60.2	107
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	78.7	62.4	108
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	77.3	59.1	111
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	73.2	51.1	109
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3097848)								
EP074-UT: Benzene	71-43-2	0.2	mg/kg	<0.2	2.1 mg/kg	84.3	69.2	116
EP074-UT: Toluene	108-88-3	0.5	mg/kg	<0.5	2.1 mg/kg	87.0	67.7	116
EP074-UT: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2.1 mg/kg	86.6	66.6	115
EP074-UT: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4.2 mg/kg	86.0	65.2	112
EP074-UT: Styrene	100-42-5	0.5	mg/kg	<0.5	2.1 mg/kg	83.0	69.4	111
EP074-UT: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2.1 mg/kg	84.3	68.4	110
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3097855)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	80.3	69.8	115
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	81.5	66.5	114
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	71.5	56.8	107
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	76.2	61.2	106
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	75.2	58.4	109
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	78.1	60.2	107
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	78.3	62.4	108
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	73.0	59.1	111
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	66.6	51.1	109
EP074B: Oxygenated Compounds (QCLot: 3095126)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	67.5	61.9	127
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	80.4	61.2	128
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	83.2	63.2	137

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074B: Oxygenated Compounds (QCLot: 3095126) - continued								
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	90.9	65.0	128
EP074B: Oxygenated Compounds (QCLot: 3097855)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	84.8	61.9	127
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	78.1	61.2	128
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	88.6	63.2	137
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	74.5	65.0	128
EP074C: Sulfonated Compounds (QCLot: 3095126)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	73.3	48.5	121
EP074C: Sulfonated Compounds (QCLot: 3097855)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	61.7	48.5	121
EP074D: Fumigants (QCLot: 3095126)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	71.9	61.4	115
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	71.5	70.1	113
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	67.4	63.2	107
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	69.8	64.8	107
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	75.9	68.3	110
EP074D: Fumigants (QCLot: 3097855)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	79.4	61.4	115
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	79.4	70.1	113
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	81.3	63.2	107
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	78.9	64.8	107
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	69.9	68.3	110
EP074E: Halogenated Aliphatic Compounds (QCLot: 3095126)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	52.8	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	69.9	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	66.4	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	68.6	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	72.5	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	68.7	60.1	123
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	71.7	61.7	119
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	55.0	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	76.9	63.6	115
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	76.3	68.0	116
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	76.8	71.0	118
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	72.5	62.4	115
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	65.2	60.3	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	64.3	57.7	112
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	77.8	73.0	116

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3095126) - continued								
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	69.0	65.5	117
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	77.1	69.8	111
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	76.1	75.6	115
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	75.6	74.5	116
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	79.2	62.6	116
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	66.6	63.2	105
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	71.2	57.5	112
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	60.8	57.8	109
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	74.8	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	92.7	72.8	119
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	60.2	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	84.0	60.8	104
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	60.9	54.1	132
EP074E: Halogenated Aliphatic Compounds (QCLot: 3097855)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	26.9	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	54.1	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	50.6	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	44.5	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	67.4	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	71.0	60.1	123
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	69.3	61.7	119
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	50.3	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	80.1	63.6	115
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	81.7	68.0	116
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	87.3	71.0	118
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	80.6	62.4	115
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	80.4	60.3	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	76.9	57.7	112
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	91.3	73.0	116
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	76.2	65.5	117
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	80.5	69.8	111
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	83.3	75.6	115
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	82.1	74.5	116
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	78.0	62.6	116
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	74.7	63.2	105
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	72.5	57.5	112
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	62.5	57.8	109
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	88.2	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	75.6	72.8	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3097855) - continued								
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	69.5	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	65.7	60.8	104
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	82.2	54.1	132
EP074F: Halogenated Aromatic Compounds (QCLot: 3095126)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	77.3	72.8	112
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	87.8	67.1	110
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	107	64.4	108
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	85.5	62.2	107
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	84.4	64.6	113
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	85.8	66.1	119
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	83.7	72.4	110
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	70.5	52.3	120
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	65.4	65.0	119
EP074F: Halogenated Aromatic Compounds (QCLot: 3097855)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	82.4	72.8	112
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	76.0	67.1	110
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	77.9	64.4	108
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	80.6	62.2	107
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	84.8	64.6	113
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	86.6	66.1	119
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	76.3	72.4	110
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	78.0	52.3	120
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	76.8	65.0	119
EP074G: Trihalomethanes (QCLot: 3095126)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	75.7	71.8	116
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	67.5	67.2	111
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	66.1	65.4	105
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	64.3	60.5	104
EP074G: Trihalomethanes (QCLot: 3097855)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	88.2	71.8	116
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	85.4	67.2	111
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	71.0	65.4	105
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	67.0	60.5	104
EP074H: Naphthalene (QCLot: 3097848)								
EP074-UT: Naphthalene	91-20-3	1	mg/kg	<1	0.6 mg/kg	94.7	72.3	114
EP074I: Volatile Halogenated Compounds (QCLot: 3097848)								
EP074-UT: Vinyl chloride	75-01-4	0.02	mg/kg	<0.02	0.1 mg/kg	57.3	47.0	138
EP074-UT: 1.1-Dichloroethene	75-35-4	0.01	mg/kg	<0.01	0.1 mg/kg	76.1	57.6	125

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP074I: Volatile Halogenated Compounds (QCLot: 3097848) - continued								
EP074-UT: Methylene chloride	75-09-2	0.4	mg/kg	<0.4	2.1 mg/kg	85.3	72.3	115
EP074-UT: trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg	<0.02	0.1 mg/kg	78.9	60.5	122
EP074-UT: cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg	<0.01	0.1 mg/kg	77.5	70.3	112
EP074-UT: Chloroform	67-66-3	0.02	mg/kg	<0.02	0.1 mg/kg	78.8	66.6	115
EP074-UT: 1.1.1-Trichloroethane	71-55-6	0.01	mg/kg	<0.01	0.1 mg/kg	76.0	64.4	122
EP074-UT: Carbon Tetrachloride	56-23-5	0.01	mg/kg	<0.01	0.1 mg/kg	76.0	58.4	127
EP074-UT: 1.2-Dichloroethane	107-06-2	0.02	mg/kg	<0.02	0.1 mg/kg	90.6	72.9	114
EP074-UT: Trichloroethene	79-01-6	0.02	mg/kg	<0.02	0.1 mg/kg	89.0	64.7	115
EP074-UT: 1.1.2-Trichloroethane	79-00-5	0.04	mg/kg	<0.04	0.1 mg/kg	80.1	72.6	116
EP074-UT: Tetrachloroethene	127-18-4	0.02	mg/kg	<0.02	0.1 mg/kg	87.7	60.0	119
EP074-UT: 1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg	<0.01	0.1 mg/kg	83.5	71.8	116
EP074-UT: 1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg	<0.02	0.1 mg/kg	76.8	66.1	116
EP074-UT: Hexachlorobutadiene	87-68-3	0.02	mg/kg	<0.02	0.1 mg/kg	91.5	39.8	128
EP074-UT: Chlorobenzene	108-90-7	0.02	mg/kg	<0.02	0.1 mg/kg	84.0	70.3	113
EP074-UT: 1.4-Dichlorobenzene	106-46-7	0.02	mg/kg	<0.02	0.1 mg/kg	84.4	62.6	113
EP074-UT: 1.2-Dichlorobenzene	95-50-1	0.02	mg/kg	<0.02	0.1 mg/kg	85.2	70.8	110
EP074-UT: 1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg	<0.01	0.1 mg/kg	91.5	48.4	120
EP075(SIM)A: Phenolic Compounds (QCLot: 3097925)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	100	80.6	124
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	106	81.4	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	102	82.4	124
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	105	80.9	128
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	90.8	51.4	123
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	107	79.0	127
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	100	76.0	125
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	109	78.6	125
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	108	69.9	121
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	103	63.9	120
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	108	64.8	123
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	82.3	20.0	117
EP075(SIM)A: Phenolic Compounds (QCLot: 3097932)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	3 mg/kg	102	80.6	124
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	3 mg/kg	103	81.4	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	3 mg/kg	105	82.4	124
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	6 mg/kg	106	80.9	128
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	3 mg/kg	93.1	51.4	123
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	3 mg/kg	108	79.0	127
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	3 mg/kg	107	76.0	125
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	3 mg/kg	104	78.6	125

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 3097932) - continued								
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	3 mg/kg	105	69.9	121
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	3 mg/kg	104	63.9	120
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	3 mg/kg	106	64.8	123
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	6 mg/kg	96.6	20.0	117
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097925)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	109	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	110	76.9	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	102	85.3	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	99.8	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	91.5	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	93.1	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	91.2	83.4	136
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	92.9	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	89.8	80.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	99.4	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	106	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	123	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	112	67.4	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	116	66.0	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	114	65.4	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	102	67.8	127
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097932)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	104	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	107	76.9	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	101	85.3	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	103	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	102	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	106	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	105	83.4	136
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	109	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	106	80.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	105	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	100.0	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	102	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	98.3	67.4	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	95.2	66.0	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	96.0	65.4	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097932) - continued								
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	96.9	67.8	127
EP075A: Phenolic Compounds (Halogenated) (QCLot: 3095242)								
EP075-EM: 2-Chlorophenol	95-57-8	0.03	mg/kg	<0.03	2 mg/kg	89.4	71.4	123
EP075-EM: 2.4-Dichlorophenol	120-83-2	0.03	mg/kg	<0.03	2 mg/kg	88.6	73.1	132
EP075-EM: 2.6-Dichlorophenol	87-65-0	0.03	mg/kg	<0.03	2 mg/kg	88.2	72.2	132
EP075-EM: 4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg	<0.03	2 mg/kg	88.0	70.8	128
EP075-EM: 2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg	<0.05	2 mg/kg	90.1	70.9	134
EP075-EM: 2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg	<0.05	2 mg/kg	89.4	70.9	126
EP075-EM: 2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg	<0.03	2 mg/kg	84.6	61.9	126
EP075-EM: 2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/5 8-90-2	0.05	mg/kg	<0.05	4 mg/kg	89.8	47.2	128
EP075-EM: Pentachlorophenol	87-86-5	0.2	mg/kg	<0.2	4 mg/kg	83.3	44.0	135
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 3095242)								
EP075-EM: Phenol	108-95-2	1	mg/kg	<1	2 mg/kg	91.3	71.5	127
EP075-EM: 2-Methylphenol	95-48-7	1	mg/kg	<1	2 mg/kg	90.3	70.2	129
EP075-EM: 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	4 mg/kg	90.7	74.0	130
EP075-EM: 2-Nitrophenol	88-75-5	1	mg/kg	<1	2 mg/kg	87.0	70.9	133
EP075-EM: 2.4-Dimethylphenol	105-67-9	1	mg/kg	<1	2 mg/kg	88.4	64.8	132
EP075-EM: 2.4-Dinitrophenol	51-28-5	5	mg/kg	<5	10 mg/kg	52.1	41.0	156
EP075-EM: 4-Nitrophenol	100-02-7	5	mg/kg	<5	10 mg/kg	90.4	52.6	128
EP075-EM: 2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg	<5	10 mg/kg	56.6	42.6	125
EP075-EM: Dinoseb	88-85-7	5	mg/kg	<5	10 mg/kg	75.4	47.3	128
EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg	<5	10 mg/kg	55.9	34.5	137
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3095242)								
EP075-EM: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2 mg/kg	88.9	73.0	131
EP075-EM: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2 mg/kg	90.7	70.8	130
EP075-EM: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2 mg/kg	90.9	72.0	135
EP075-EM: Fluorene	86-73-7	0.5	mg/kg	<0.5	2 mg/kg	91.8	74.4	131
EP075-EM: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2 mg/kg	91.3	73.3	130
EP075-EM: Anthracene	120-12-7	0.5	mg/kg	<0.5	2 mg/kg	92.2	59.4	127
EP075-EM: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2 mg/kg	96.6	75.3	132
EP075-EM: Pyrene	129-00-0	0.5	mg/kg	<0.5	2 mg/kg	97.2	75.4	130
EP075-EM: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2 mg/kg	99.9	69.6	133
EP075-EM: Chrysene	218-01-9	0.5	mg/kg	<0.5	2 mg/kg	98.6	75.0	133
EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1.0	4 mg/kg	98.2	75.8	133
EP075-EM: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2 mg/kg	98.5	65.1	130
EP075-EM: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2 mg/kg	96.6	72.1	134

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3095242) - continued								
EP075-EM: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	2 mg/kg	95.8	72.9	135
EP075-EM: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	2 mg/kg	96.8	71.3	134
EP075I: Organochlorine Pesticides (QCLot: 3095242)								
EP075-EM: alpha-BHC	319-84-6	0.03	mg/kg	<0.03	2 mg/kg	89.8	71.0	129
EP075-EM: Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	<0.03	2 mg/kg	91.2	65.9	125
EP075-EM: beta-BHC	319-85-7	0.03	mg/kg	<0.03	2 mg/kg	93.2	66.2	130
EP075-EM: gamma-BHC	58-89-9	0.03	mg/kg	<0.03	2 mg/kg	93.0	70.8	130
EP075-EM: delta-BHC	319-86-8	0.03	mg/kg	<0.03	2 mg/kg	90.3	68.7	134
EP075-EM: Heptachlor	76-44-8	0.03	mg/kg	<0.03	2 mg/kg	89.0	67.2	131
EP075-EM: Aldrin	309-00-2	0.03	mg/kg	<0.03	2 mg/kg	90.6	70.2	130
EP075-EM: Heptachlor epoxide	1024-57-3	0.03	mg/kg	<0.03	2 mg/kg	91.1	65.6	130
EP075-EM: cis-Chlordane	5103-71-9	0.03	mg/kg	<0.03	2 mg/kg	94.6	65.3	133
EP075-EM: trans-Chlordane	5103-74-2	0.03	mg/kg	<0.03	2 mg/kg	94.0	66.7	131
EP075-EM: Endosulfan 1	959-98-8	0.03	mg/kg	<0.03	2 mg/kg	95.8	67.9	135
EP075-EM: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	2 mg/kg	92.7	70.9	132
EP075-EM: Dieldrin	60-57-1	0.03	mg/kg	<0.03	2 mg/kg	92.9	70.0	133
EP075-EM: Endrin aldehyde	7421-93-4	0.03	mg/kg	<0.03	2 mg/kg	91.8	49.6	157
EP075-EM: Endrin	72-20-8	0.03	mg/kg	<0.03	2 mg/kg	97.6	55.4	148
EP075-EM: Endosulfan 2	33213-65-9	0.03	mg/kg	<0.03	2 mg/kg	94.9	71.4	135
EP075-EM: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	2 mg/kg	96.6	74.8	134
EP075-EM: Endosulfan sulfate	1031-07-8	0.03	mg/kg	<0.03	2 mg/kg	99.2	70.2	135
EP075-EM: 4.4`-DDT	50-29-3	0.05	mg/kg	<0.05	2 mg/kg	95.2	67.1	133
EP075-EM: Methoxychlor	72-43-5	0.03	mg/kg	<0.03	2 mg/kg	101	63.6	135
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095108)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	102	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095125)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	88.7	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095243)								
EP071-EM: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	86.7	69.9	128
EP071-EM: C15 - C28 Fraction	----	100	mg/kg	<100	3030 mg/kg	98.0	83.0	124
EP071-EM: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	102	76.9	117
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097848)								
EP074-UT: C6 - C9 Fraction	----	10	mg/kg	<10	39.6 mg/kg	84.8	61.1	119
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097856)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	72.9	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097926)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	87.9	71.8	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3030 mg/kg	95.8	83.9	125

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097926) - continued								
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	98.6	77.9	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097931)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	101	71.8	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3030 mg/kg	103	83.9	125
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	101	77.9	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095108)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	93.1	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095125)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	94.8	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095243)								
EP071-EM: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	94.2	70.2	126
EP071-EM: >C16 - C34 Fraction	----	100	mg/kg	<100	4020 mg/kg	98.2	81.4	120
EP071-EM: >C34 - C40 Fraction	----	100	mg/kg	<100	280 mg/kg	99.2	53.4	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097848)								
EP074-UT: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	48.9 mg/kg	83.2	59.9	119
EP074-UT: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097856)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	71.1	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097926)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	95.8	72.2	128
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4020 mg/kg	95.9	82.1	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	280 mg/kg	91.9	55.1	131
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097931)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	100	72.2	128
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4020 mg/kg	101	82.1	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	280 mg/kg	111	55.1	131
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN (QCLot: 3095108)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	84.1	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	101	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	95.2	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	108	67.5	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 3095108) - continued								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	103	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	80.5	61.2	123
EP080: BTEXN (QCLot: 3095125)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	87.8	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	91.2	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	92.1	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	96.9	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	96.9	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	88.7	61.2	123
EP080: BTEXN (QCLot: 3097856)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	67.0	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	69.0	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	71.4	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	71.7	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	73.8	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	65.9	61.2	123

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 3095227)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	106	89.2	113
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	102	86.4	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	94.7	86.9	110
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.4	86.9	109
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	99.5	88.3	110
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	101	87.9	111
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	103	86.7	114
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3095460)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	102	72.6	115
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3095343)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	66.5	41.1	116
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	73.5	47.2	121
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	72.1	47.3	118
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	74.4	49.4	121
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	78.1	52.5	124
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	77.6	52.3	125

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3095343) - continued								
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	79.0	52.4	127
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	82.2	51.3	130
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	78.9	50.0	130
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	78.0	49.6	131
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	79.7	51.5	132
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	81.7	54.0	131
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	81.1	52.3	133
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	81.1	50.4	127
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	80.7	50.0	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	81.6	50.8	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095344)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	3330 µg/L	71.2	44.8	125
EP071: C15 - C28 Fraction	----	100	µg/L	<100	16500 µg/L	63.5	51.3	135
EP071: C29 - C36 Fraction	----	50	µg/L	<50	7800 µg/L	63.4	49.4	134
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3096856)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	109	65.5	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095344)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	5690 µg/L	65.0	47.3	129
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	20700 µg/L	64.5	50.4	133
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	1510 µg/L	64.4	45.2	136
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3096856)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	107	64.3	126
EP080: BTEXN (QCLot: 3096856)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	109	69.8	124
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	124	73.6	126
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	110	72.0	126
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	109	71.5	132
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	118	76.5	132
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	118	70.5	127

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

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

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098572)							
EM2010198-005	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	93.6	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.6	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	91.4	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	108	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	91.4	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	112	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	81.3	80.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3098573)							
EM2010590-028	STP04_0.6	EG005T: Arsenic	7440-38-2	50 mg/kg	89.3	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	86.4	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	84.6	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	106	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	88.8	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	82.1	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	99.9	80.0	120
ED040N: Sulfate - Calcium Phosphate Soluble (NEPM) (QCLot: 3098891)							
EM2010511-009	Anonymous	ED040N: Sulfate as SO4 2-	14808-79-8	3000 mg/kg	101	84.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098571)							
EM2010198-005	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	110	76.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3098574)							
EM2010590-028	STP04_0.6	EG035T: Mercury	7439-97-6	0.5 mg/kg	# 117	76.0	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098521)							
EM2010516-032	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	# 47.5	58.0	114
EM2010516-032	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	64.3	58.0	114
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3098522)							
EM2010590-023	STP02_0.3	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	# 39.4	58.0	114
EM2010590-023	STP02_0.3	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	66.6	58.0	114
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098887)							
EM2010573-001	Anonymous	EK026SF: Total Cyanide	57-12-5	20 mg/kg	80.1	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3098888)							
EM2010590-052	STP17_0.2	EK026SF: Total Cyanide	57-12-5	20 mg/kg	93.8	70.0	130
EK040T: Fluoride Total (QCLot: 3098003)							
EM2010512-024	Anonymous	EK040T: Fluoride	16984-48-8	400 mg/kg	96.5	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3095244)							
EM2010512-024	Anonymous	EP066-EM: Total Polychlorinated biphenyls	----	1 mg/kg	114	36.0	152

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3097927)							
EM2010590-026	STP03_0.4	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	95.8	44.0	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 3097928)							
EM2010590-028	STP04_0.6	EP068: gamma-BHC	58-89-9	0.5 mg/kg	87.2	22.0	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	77.2	18.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	91.6	23.0	136
		EP068: Dieldrin	60-57-1	0.5 mg/kg	90.8	42.0	136
		EP068: Endrin	72-20-8	0.5 mg/kg	71.3	23.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	32.6	20.0	133
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3097848)							
EM2010512-002	Anonymous	EP074-UT: Benzene	71-43-2	2 mg/kg	85.5	50.0	138
		EP074-UT: Toluene	108-88-3	2 mg/kg	80.6	56.0	134
EP074E: Halogenated Aliphatic Compounds (QCLot: 3095126)							
EM2010314-004	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	102	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	88.8	50.0	126
EP074E: Halogenated Aliphatic Compounds (QCLot: 3097855)							
EM2010555-016	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	79.5	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	85.3	50.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 3095126)							
EM2010314-004	Anonymous	EP074: Chlorobenzene	108-90-7	2 mg/kg	107	65.0	133
EP074F: Halogenated Aromatic Compounds (QCLot: 3097855)							
EM2010555-016	Anonymous	EP074: Chlorobenzene	108-90-7	2 mg/kg	89.8	65.0	133
EP074I: Volatile Halogenated Compounds (QCLot: 3097848)							
EM2010512-002	Anonymous	EP074-UT: 1.1-Dichloroethene	75-35-4	2 mg/kg	72.7	26.0	141
		EP074-UT: Trichloroethene	79-01-6	2 mg/kg	80.6	50.0	134
		EP074-UT: Chlorobenzene	108-90-7	2 mg/kg	77.8	28.0	134
EP075(SIM)A: Phenolic Compounds (QCLot: 3097925)							
EM2010512-009	Anonymous	EP075(SIM): Phenol	108-95-2	3 mg/kg	101	63.0	117
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	93.0	65.0	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	94.1	40.0	134
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	85.4	56.0	122
		EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	52.7	15.3	139
EP075(SIM)A: Phenolic Compounds (QCLot: 3097932)							
EM2010590-002	MW001_1.5	EP075(SIM): Phenol	108-95-2	3 mg/kg	102	63.0	117
		EP075(SIM): 2-Chlorophenol	95-57-8	3 mg/kg	102	65.0	123
		EP075(SIM): 2-Nitrophenol	88-75-5	3 mg/kg	86.6	40.0	134
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	102	56.0	122

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 3097932) - continued							
EM2010590-002	MW001_1.5	EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	70.5	15.3	139
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097925)							
EM2010512-009	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	107	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	# Not Determined	52.0	148
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3097932)							
EM2010590-002	MW001_1.5	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	99.8	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	104	52.0	148
EP075A: Phenolic Compounds (Halogenated) (QCLot: 3095242)							
EM2010512-002	Anonymous	EP075-EM: 2-Chlorophenol	95-57-8	3 mg/kg	93.4	34.0	118
		EP075-EM: 4-Chloro-3-methylphenol	59-50-7	3 mg/kg	78.8	41.0	139
		EP075-EM: Pentachlorophenol	87-86-5	3 mg/kg	64.4	10.0	144
EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 3095242)							
EM2010512-002	Anonymous	EP075-EM: Phenol	108-95-2	3 mg/kg	94.4	31.5	134
		EP075-EM: 2-Nitrophenol	88-75-5	3 mg/kg	96.2	13.0	129
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3095242)							
EM2010512-002	Anonymous	EP075-EM: Acenaphthene	83-32-9	3 mg/kg	78.7	46.0	138
		EP075-EM: Pyrene	129-00-0	3 mg/kg	38.0	26.5	169
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095108)							
EM2010509-004	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	89.3	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095125)							
EM2010314-004	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	86.6	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3095243)							
EM2010512-010	Anonymous	EP071-EM: C10 - C14 Fraction	----	900 mg/kg	84.7	53.0	123
		EP071-EM: C15 - C28 Fraction	----	3030 mg/kg	90.2	70.0	124
		EP071-EM: C29 - C36 Fraction	----	1520 mg/kg	93.3	64.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097848)							
EM2010512-002	Anonymous	EP074-UT: C6 - C9 Fraction	----	28 mg/kg	73.1	43.0	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097856)							
EM2010555-016	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	78.7	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097926)							
EM2010512-013	Anonymous	EP071: C10 - C14 Fraction	----	900 mg/kg	82.8	53.0	123
		EP071: C15 - C28 Fraction	----	3030 mg/kg	88.3	70.0	124
		EP071: C29 - C36 Fraction	----	1520 mg/kg	91.3	64.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097931)							

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3097931) - continued							
EM2010555-002	Anonymous	EP071: C10 - C14 Fraction	----	900 mg/kg	101	53.0	123
		EP071: C15 - C28 Fraction	----	3030 mg/kg	102	70.0	124
		EP071: C29 - C36 Fraction	----	1520 mg/kg	97.8	64.0	118
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095108)							
EM2010509-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	82.1	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095125)							
EM2010314-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	83.7	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3095243)							
EM2010512-010	Anonymous	EP071-EM: >C10 - C16 Fraction	----	1160 mg/kg	89.2	65.0	123
		EP071-EM: >C16 - C34 Fraction	----	4020 mg/kg	90.3	67.0	121
		EP071-EM: >C34 - C40 Fraction	----	280 mg/kg	87.3	44.0	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097848)							
EM2010512-002	Anonymous	EP074-UT: C6 - C10 Fraction	C6_C10	33 mg/kg	73.1	42.0	106
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097856)							
EM2010555-016	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	76.3	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097926)							
EM2010512-013	Anonymous	EP071: >C10 - C16 Fraction	----	1160 mg/kg	89.5	65.0	123
		EP071: >C16 - C34 Fraction	----	4020 mg/kg	88.5	67.0	121
		EP071: >C34 - C40 Fraction	----	280 mg/kg	87.6	44.0	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3097931)							
EM2010555-002	Anonymous	EP071: >C10 - C16 Fraction	----	1160 mg/kg	99.5	65.0	123
		EP071: >C16 - C34 Fraction	----	4020 mg/kg	99.0	67.0	121
		EP071: >C34 - C40 Fraction	----	280 mg/kg	96.5	44.0	126
EP080: BTEXN (QCLot: 3095108)							
EM2010509-004	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	87.5	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	95.6	56.0	139
EP080: BTEXN (QCLot: 3095125)							
EM2010314-004	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	105	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	107	56.0	139
EP080: BTEXN (QCLot: 3097856)							
EM2010555-016	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	97.1	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	93.3	56.0	139

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%) MS	Recovery Limits (%) Low	High

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 3095227)							
EM2010408-013	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	105	82.0	118
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	106	75.0	129
		EG020A-T: Chromium	7440-47-3	1 mg/L	100	80.0	118
		EG020A-T: Copper	7440-50-8	1 mg/L	96.8	81.0	115
		EG020A-T: Lead	7439-92-1	1 mg/L	106	83.0	121
		EG020A-T: Nickel	7440-02-0	1 mg/L	102	80.0	118
		EG020A-T: Zinc	7440-66-6	1 mg/L	103	74.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3095460)							
EM2010349-002	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	80.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3096856)							
EM2010590-020	RB_200617	EP080: C6 - C9 Fraction	----	280 µg/L	79.6	43.0	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3096856)							
EM2010590-020	RB_200617	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	74.7	44.0	122
EP080: BTEXN (QCLot: 3096856)							
EM2010590-020	RB_200617	EP080: Benzene	71-43-2	20 µg/L	114	68.0	130
		EP080: Toluene	108-88-3	20 µg/L	115	72.0	132

ALS Environmental

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Jacobs	TURNAROUND REQUIREMENTS: ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	QUOTE NO.: (Eurofins - 200611JAC)
ORDER NUMBER: (Eurofins - 1574)	
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: JT / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; seb.metagesha@jacobs.com; arthur.tao@jacobs.com	
Email EdDAT Files to: jacob.taylor@jacobs.com; seb.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

COC SEQUENCE NUMBER (Circle)
COC: 1
SOF: 1

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt °C
Cooler comment

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JACOBS	Jahee		
DATE/TIME: 19/6	DATE/TIME: 19/6 1:07pm	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | CONTAINER INFORMATION | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required). | Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	NWRG 621 suite (P-16)	Metals (8) / TRH / BTEXN / PAHs (S-26)	Total Metals (As, Ba, B, Cd, Cr, Co, Cu, Pb, Mn, Ni, Zn, Mercury / Cr VI) (EG005T / EG035T / EG045M)	Additional metals (Ag, Mo, Sn)	OC/PCB (S-11)	OC/OP/PCB (S-13)	pH field/flox (EA003)	Chromium Suite for Acid (EA033) Sulphate Soils	TRH(C6-9)/BTEXN (S-18)	Sulfide (RG040M)	Perfluorooctanoic acid / Sulfonamides / Triazine herbicides (EP201/EP202/EP234)	Total Cyanide (EK026SF)	Total Fluoride (EK040T)	pH (CaCl2)	Sulphate / Cl / pH (Corr. Sch. 7)	TRH/BTEXN/PAH/Phenols (S-26)+ VOCs (EP074)	Synthetic pyrethroids (EP084)	Adsorbs (pesticide) (EA300)	Nutrients (NT-45)	Soil Characterisation (P-22)	E. coli / Toxophene (EP069)		HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	QA201_200618	17/05/2020	Soil	ICE	2	X																						
				TOTAL	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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

726669

#AU_CAU001_EnviroSampleVic

From: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Sent: Friday, 19 June 2020 1:07 PM
To: Harry Bacalis; #AU_CAU001_EnviroSampleVic
Cc: Teo, Arthur
Subject: IS305100 - COC sample dispatch 19th June 2020
Attachments: IS305100_Eurofins CoC_200619.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Hi Harry,

Please see attached COC for the sample dispatched this morning.

Can you advise the correct email for Eurofins sample receipt team? (Not sure that the above is correct...)

Thanks,

Jacob Taylor | Jacobs | Environmental Scientist | Contaminated Land Assessment & Remediation ANZ
O:+61 3 8668 6317 | M:+61 427 931 093 | jacob.taylor@jacobs.com
Level 11, 452 Flinders Street | Melbourne, Victoria 3000 | Australia

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PROJECT INFORMATION

Date Received: 19/6/20, 12:35pm

Company: Jacobs

Contact person: JTIAM

Contact Number:

Contact E-mail:

Project Name/site:

Project Number: B305100

COC: Attached ☐
E-mailed ☐
Not received ☐

3.1°C
ice

Last modified on: 16 October 2019	Approved on: 16 October 2019	Version: QS1039_R2
Last modified by: H. Le	Approver: M. Makarios	Page 1 of 1
Editorial Committee: T. Lakeland, F. Sanjaya, H. Le, M. Makarios		Next required review date: 16 October 2022

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Project Name: IS305100

Order No.:
Report #: 726669
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Jun 19, 2020 1:07 PM
Due: Jun 26, 2020
Priority: 5 Day
Contact Name: Jacob Taylor

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Moisture Set	Vic EPA IWRG 621 (Solids)
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	QA201_200618	Jun 17, 2020		Soil	M20-Jn32955	X	X
Test Counts						1	1

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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:	**Jacobs Group (Australia) P/L VIC**
Contact name:	Jacob Taylor
Project name:	IS305100
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jun 19, 2020 1:07 PM
Eurofins reference:	**726669**

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:

Harry Bacalis on Phone : or by e.mail: HarryBacalis@eurofins.com

Results will be delivered electronically via e.mail to Jacob Taylor - Jacob.Taylor@jacobs.com.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

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.

Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

Attention: **Jacob Taylor**

Report **726669-S**
Project name IS305100
Received Date Jun 19, 2020

Client Sample ID			**QA201_200618**
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Jn32955**
Date Sampled			**Jun 17, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Volatile Organics			
Hexachlorobutadiene	0.5	mg/kg	< 0.5
Volatile Organics			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5

Client Sample ID			QA201_200618
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn32955
Date Sampled			Jun 17, 2020
Test/Reference	LOR	Unit	
Volatile Organics			
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	58
Toluene-d8 (surr.)	1	%	84
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5

Client Sample ID			QA201_200618
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn32955
Date Sampled			Jun 17, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	66
p-Terphenyl-d14 (surr.)	1	%	84
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	109
Tetrachloro-m-xylene (surr.)	1	%	57
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1

Client Sample ID			QA201_200618
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn32955
Date Sampled			Jun 17, 2020
Test/Reference	LOR	Unit	
Polychlorinated Biphenyls			
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	109
Tetrachloro-m-xylene (surr.)	1	%	57
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20
Phenol-d6 (surr.)	1	%	62
Chromium (hexavalent)	1	mg/kg	< 1
Cyanide (total)	5	mg/kg	< 5
Fluoride (Total)	100	mg/kg	130
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	9.9
% Moisture	1	%	18
Heavy Metals			
Arsenic	2	mg/kg	4.3
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	70
Copper	5	mg/kg	23
Lead	5	mg/kg	5.6
Mercury	0.1	mg/kg	< 0.1
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	76
Selenium	2	mg/kg	< 2
Silver	0.2	mg/kg	< 0.2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	40

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
Vic EPA IWRG 621 (Solids)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Jun 22, 2020	7 Days
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Volatile Organics	Melbourne	Jun 22, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 22, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Jun 22, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Phenols (Halogenated)	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Chromium (hexavalent)	Melbourne	Jun 22, 2020	28 Days
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Cyanide (total)	Melbourne	Jun 22, 2020	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Fluoride (Total)	Melbourne	Jun 23, 2020	28 Days
- Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Jun 22, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals IWRG 621 : Metals M12	Melbourne	Jun 22, 2020	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Jun 19, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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

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

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Project Name: IS305100

Order No.:
Report #: 726669
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Received: Jun 19, 2020 1:07 PM
Due: Jun 25, 2020
Priority: 5 Day
Contact Name: Jacob Taylor

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Moisture Set	Vic EPA IWRG 621 (Solids)
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	QA201_200618	Jun 17, 2020		Soil	M20-Jn32955	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
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							
Volatile Organics							
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride (Total)	mg/kg	< 100			100	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	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Silver	mg/kg	< 0.2			0.2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	115			70-130	Pass	
TRH C10-C14	%	109			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	79			70-130	Pass	
1.1.1-Trichloroethane	%	74			70-130	Pass	
1.2-Dichlorobenzene	%	76			70-130	Pass	
1.2-Dichloroethane	%	119			70-130	Pass	
Benzene	%	109			70-130	Pass	
Ethylbenzene	%	70			70-130	Pass	
m&p-Xylenes	%	70			70-130	Pass	
Toluene	%	98			70-130	Pass	
Trichloroethene	%	90			70-130	Pass	
Xylenes - Total*	%	73			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	87			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
TRH >C10-C16	%	103			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	105			70-130	Pass	
Anthracene	%	125			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	114			70-130	Pass	
Benzo(b&j)fluoranthene	%	119			70-130	Pass	
Benzo(g.h.i)perylene	%	113			70-130	Pass	
Benzo(k)fluoranthene	%	123			70-130	Pass	
Chrysene	%	114			70-130	Pass	
Dibenz(a.h)anthracene	%	102			70-130	Pass	
Fluoranthene	%	110			70-130	Pass	
Fluorene	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	100			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	122			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	82			70-130	Pass	
4.4'-DDD	%	77			70-130	Pass	
4.4'-DDE	%	90			70-130	Pass	
4.4'-DDT	%	73			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	99			70-130	Pass	
b-BHC	%	100			70-130	Pass	
d-BHC	%	88			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	110			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	%	76			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	71			70-130	Pass	
Endrin aldehyde	%	78			70-130	Pass	
Endrin ketone	%	82			70-130	Pass	
g-BHC (Lindane)	%	88			70-130	Pass	
Heptachlor	%	105			70-130	Pass	
Heptachlor epoxide	%	89			70-130	Pass	
Hexachlorobenzene	%	79			70-130	Pass	
Methoxychlor	%	100			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	71			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	95			30-130	Pass	
2.4-Dichlorophenol	%	89			30-130	Pass	
2.4.5-Trichlorophenol	%	78			30-130	Pass	
2.4.6-Trichlorophenol	%	90			30-130	Pass	
2.6-Dichlorophenol	%	64			30-130	Pass	
4-Chloro-3-methylphenol	%	95			30-130	Pass	
Pentachlorophenol	%	73			30-130	Pass	
Tetrachlorophenols - Total	%	73			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	78			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	39			30-130	Pass	
2-Methylphenol (o-Cresol)	%	100			30-130	Pass	
2-Nitrophenol	%	96			30-130	Pass	
2.4-Dimethylphenol	%	97			30-130	Pass	
2.4-Dinitrophenol	%	49			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			30-130	Pass	
4-Nitrophenol	%	105			30-130	Pass	
Dinoseb	%	52			30-130	Pass	
Phenol	%	99			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	104			70-130	Pass	
Cyanide (total)	%	99			70-130	Pass	
Fluoride (Total)	%	107			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	110			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	116			80-120	Pass	
Copper	%	112			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	101			75-125	Pass	
Molybdenum	%	111			80-120	Pass	
Nickel	%	108			80-120	Pass	
Selenium	%	111			80-120	Pass	
Silver	%	103			80-120	Pass	
Tin	%	109			80-120	Pass	
Zinc	%	107			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	M20-Jn37327	NCP	%	111			70-130	Pass	
TRH C10-C14	M20-Jn35093	NCP	%	108			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M20-Jn37327	NCP	%	118			70-130	Pass	
1.1.1-Trichloroethane	M20-Jn37327	NCP	%	96			70-130	Pass	
1.2-Dichlorobenzene	M20-Jn37327	NCP	%	116			70-130	Pass	
1.2-Dichloroethane	M20-Jn37327	NCP	%	124			70-130	Pass	
Benzene	M20-Jn37327	NCP	%	127			70-130	Pass	
Ethylbenzene	M20-Jn37327	NCP	%	121			70-130	Pass	
m&p-Xylenes	M20-Jn37327	NCP	%	120			70-130	Pass	
o-Xylene	M20-Jn37327	NCP	%	127			70-130	Pass	
Toluene	M20-Jn37327	NCP	%	126			70-130	Pass	
Trichloroethene	M20-Jn37327	NCP	%	116			70-130	Pass	
Xylenes - Total*	M20-Jn37327	NCP	%	123			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Jn37327	NCP	%	117			70-130	Pass	
TRH C6-C10	M20-Jn37327	NCP	%	106			70-130	Pass	
TRH >C10-C16	M20-Jn35093	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	Z20-Jn26968	NCP	%	104			70-130	Pass	
Acenaphthylene	Z20-Jn26968	NCP	%	119			70-130	Pass	
Anthracene	Z20-Jn26968	NCP	%	107			70-130	Pass	
Benz(a)anthracene	Z20-Jn26968	NCP	%	116			70-130	Pass	
Benzo(a)pyrene	Z20-Jn26968	NCP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	Z20-Jn26968	NCP	%	89			70-130	Pass	
Benzo(g.h.i)perylene	Z20-Jn26968	NCP	%	114			70-130	Pass	
Benzo(k)fluoranthene	Z20-Jn26968	NCP	%	102			70-130	Pass	
Chrysene	Z20-Jn26968	NCP	%	129			70-130	Pass	
Dibenz(a.h)anthracene	Z20-Jn26968	NCP	%	126			70-130	Pass	
Fluoranthene	Z20-Jn26968	NCP	%	115			70-130	Pass	
Fluorene	Z20-Jn26968	NCP	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	Z20-Jn26968	NCP	%	90			70-130	Pass	
Naphthalene	Z20-Jn26968	NCP	%	101			70-130	Pass	
Phenanthrene	Z20-Jn26968	NCP	%	97			70-130	Pass	
Pyrene	Z20-Jn26968	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Jn31067	NCP	%	92			70-130	Pass	
4.4'-DDD	M20-Jn31067	NCP	%	100			70-130	Pass	
4.4'-DDE	M20-Jn31067	NCP	%	102			70-130	Pass	
4.4'-DDT	M20-Jn31067	NCP	%	76			70-130	Pass	
a-BHC	M20-Jn31067	NCP	%	87			70-130	Pass	
Aldrin	M20-Jn31067	NCP	%	93			70-130	Pass	
b-BHC	M20-Jn31067	NCP	%	100			70-130	Pass	
d-BHC	M20-Jn31067	NCP	%	77			70-130	Pass	
Dieldrin	M20-Jn31067	NCP	%	89			70-130	Pass	
Endosulfan I	M20-Jn31067	NCP	%	121			70-130	Pass	
Endosulfan II	M20-Jn31067	NCP	%	106			70-130	Pass	
Endosulfan sulphate	M20-Jn31067	NCP	%	75			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin	M20-Jn31067	NCP	%	74			70-130	Pass	
Endrin aldehyde	M20-Jn31067	NCP	%	87			70-130	Pass	
Endrin ketone	M20-Jn31067	NCP	%	85			70-130	Pass	
g-BHC (Lindane)	M20-Jn31067	NCP	%	96			70-130	Pass	
Heptachlor	M20-Jn31067	NCP	%	94			70-130	Pass	
Heptachlor epoxide	M20-Jn31067	NCP	%	92			70-130	Pass	
Hexachlorobenzene	M20-Jn31067	NCP	%	80			70-130	Pass	
Methoxychlor	M20-Jn31067	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M20-Jn36755	NCP	%	79			70-130	Pass	
Aroclor-1260	M20-Jn36755	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	Z20-Jn26968	NCP	%	101			30-130	Pass	
2.4-Dichlorophenol	Z20-Jn26968	NCP	%	84			30-130	Pass	
2.4.5-Trichlorophenol	Z20-Jn26968	NCP	%	78			30-130	Pass	
2.4.6-Trichlorophenol	Z20-Jn26968	NCP	%	110			30-130	Pass	
2.6-Dichlorophenol	Z20-Jn26968	NCP	%	81			30-130	Pass	
4-Chloro-3-methylphenol	Z20-Jn26968	NCP	%	101			30-130	Pass	
Pentachlorophenol	Z20-Jn26968	NCP	%	89			30-130	Pass	
Tetrachlorophenols - Total	Z20-Jn26968	NCP	%	69			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	Z20-Jn26968	NCP	%	34			30-130	Pass	
2-Methyl-4.6-dinitrophenol	Z20-Jn26968	NCP	%	77			30-130	Pass	
2-Methylphenol (o-Cresol)	Z20-Jn26968	NCP	%	107			30-130	Pass	
2-Nitrophenol	Z20-Jn26968	NCP	%	94			30-130	Pass	
2.4-Dimethylphenol	Z20-Jn26968	NCP	%	80			30-130	Pass	
2.4-Dinitrophenol	Z20-Jn26968	NCP	%	68			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	Z20-Jn26968	NCP	%	107			30-130	Pass	
4-Nitrophenol	Z20-Jn26968	NCP	%	117			30-130	Pass	
Dinoseb	Z20-Jn26968	NCP	%	87			30-130	Pass	
Phenol	Z20-Jn26968	NCP	%	110			30-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M20-Jn32242	NCP	%	99			70-130	Pass	
Cyanide (total)	P20-Jn33088	NCP	%	16			70-130	Fail	Q08
Fluoride (Total)	M20-Jn28021	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn33729	NCP	%	97			75-125	Pass	
Cadmium	M20-Jn33729	NCP	%	96			75-125	Pass	
Chromium	M20-Jn33729	NCP	%	100			75-125	Pass	
Copper	M20-Jn33729	NCP	%	97			75-125	Pass	
Lead	M20-Jn33729	NCP	%	50			75-125	Fail	Q08
Mercury	M20-Jn33729	NCP	%	97			70-130	Pass	
Molybdenum	M20-Jn33729	NCP	%	110			75-125	Pass	
Nickel	M20-Jn33729	NCP	%	99			75-125	Pass	
Selenium	M20-Jn33729	NCP	%	100			75-125	Pass	
Silver	M20-Jn33729	NCP	%	97			75-125	Pass	
Tin	M20-Jn33729	NCP	%	101			75-125	Pass	
Zinc	M20-Jn33729	NCP	%	51			75-125	Fail	Q08

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Jn33527	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Jn35465	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Jn35465	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Jn35465	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzene	M20-Jn33527	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Bromobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	M20-Jn33527	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Iodomethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
m&p-Xylenes	M20-Jn33527	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Methylene Chloride	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
o-Xylene	M20-Jn33527	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Styrene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M20-Jn33527	NCP	mg/kg	0.6	0.7	10	30%	Pass	
Toluene	M20-Jn33527	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes - Total*	M20-Jn33527	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Jn33527	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Jn33527	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Jn35465	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Jn35465	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Jn35465	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Jn33441	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Heptachlor	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn33441	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Jn33441	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Jn33441	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Jn33441	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	M20-Jn33441	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M20-Jn33441	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M20-Jn33441	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jn33441	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M20-Jn33441	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	M20-Jn33441	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Jn33441	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Jn33441	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	M20-Jn33441	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M20-Jn33441	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	M20-Jn33441	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M20-Jn32241	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Cyanide (total)	P20-Jn33087	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Fluoride (Total)	M20-Jn28020	NCP	mg/kg	140	260	58	30%	Fail	Q15
pH (1:5 Aqueous extract at 25°C as rec.)	M20-Jn43960	NCP	pH Units	10	10	pass	30%	Pass	
% Moisture	B20-Jn32725	NCP	%	73	73	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn33728	NCP	mg/kg	2.1	< 2	7.0	30%	Pass	
Cadmium	M20-Jn33728	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn33728	NCP	mg/kg	25	26	2.0	30%	Pass	
Copper	M20-Jn33728	NCP	mg/kg	51	51	1.0	30%	Pass	
Lead	M20-Jn33728	NCP	mg/kg	210	210	<1	30%	Pass	
Mercury	M20-Jn33728	NCP	mg/kg	0.1	0.1	4.0	30%	Pass	
Molybdenum	M20-Jn33728	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn33728	NCP	mg/kg	34	35	1.0	30%	Pass	
Selenium	M20-Jn33728	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn33728	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn33728	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn33728	NCP	mg/kg	320	320	<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.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Harry Bacalis	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ALS Environmental

CHAIN OF CUSTODY

ALS Laboratory: please tick →

[illegible]

CLIENT: Jacobs	TURNAROUND REQUIREMENT ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	ALS QUOTE NO.: ME/473/20 (Eurofins - 200611JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	COC SEQUENCE NUMBER (Circle) COC: 1 OF: 1
PROJECT MANAGER: Kate Munro	CONTACT PH:
SAMPLER: EM / AM	SAMPLER MOBILE: 0427 931 093
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Erin McIntosh	Sam		
DATE/TIME: 26/6/20	DATE/TIME: 11:00 26/6/20	DATE/TIME:	DATE/TIME:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

Additional Information

ALS USE: LAB ID	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W): SAMPLE ID	DATE / TIME	MATRIX	CONTAINER INFORMATION: TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	Solvents suite (CM051-S)	Total Nitrogen, NO2, NO3, NH3 + Total P (NT-8)	Metals (Al, As, Ba, B, Cd, Cr(VI), Co, Cu, Pb, Mn, Hg, Ni, Se and Zn) (EG020F/EG050/ EG035F)	Additional metals (Ag, Mo, Sn)	Major ions / TDS (NT01&02 / EA015H)	TRH / BTEXN / PAH / Phenols (W-24)	Low level VOCs (EP074-WF)	pH & chloride / Sulfate as SO4 (Corr Sch 3 / EA015H)	Ultratrace OC and OP (extended), PCB Pesticides (UTO-10W)	Acrylamide / SVOC - Phthalate Esters (EP010 / EP118-1 / EP233 / EP075C)	Glyphosate / Synthetic Pyrethroids (EP201 /EP202SL /EP204 /EP094)	Methyl tert-Butyl Ether - MTBE (EP074L)	Total cyanide / Free CN (EK026SF / EK025SF)	E. coli (MM514)	Triazine Herbicides (EP234H)	Metals (8) / TRH / BTEXN / PAHs (S-26)	TRH(C6-9)/BTEXN (S-18)						HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MW001_200625	25/06/2020 13:30	W	ICE	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
2	RB_200625	25/06/2020	W	ICE	5			X	X		X	X																	
→	QC01_200625	25/06/2020 13:30	W	ICE	10															X	X								Please forward to Eurofins
3	TB01_200625	15/06/2020	W	ICE	3																							X	
4	FB_200625	25/06/2020 14:00	W	ICE	3																	X							
					0																								
					0																								
					0																								
					0																								
					0																								
					0																								
					0																								
					0																								
			MT	25/6	0																								
					0																								
					0																								
					0																								
					0																								
					0																								
					0																								
				TOTAL																									

Samples sent to lab
~~Micro~~ Nitrate BOD pH
Colour Turbidity RP
Other
Date 26/6/20

Environmental Division
Melbourne
Work Order Reference
EM2010819

Telephone : + 61-3-8549 9600

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

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2010819**

Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: kate.munro@jacobs.com	E-mail	: peter.ravlic@alsglobal.com
Telephone	: ----	Telephone	: +6138549 9645
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: IS305100	Page	: 1 of 4
Order number	: 1578	Quote number	: EM2020SINKNI0005 (ME/473/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: EM/AM		

Dates

Date Samples Received	: 26-Jun-2020 11:00	Issue Date	: 02-Jul-2020
Client Requested Due Date	: 03-Jul-2020	Scheduled Reporting Date	: **03-Jul-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 2	Temperature	: 2.4°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 4 / 3

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale, ALS Scoresby, ALS Sydney and ALS Brisbane.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Preliminary results will be available on the scheduled reporting date listed in this report. However the final report with organics analysis will be complete on 06/07/2020.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

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

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - Corr. Schedule 3 Water on Steel Piles	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EG020F Dissolved Metals by ICP/MS	WATER - EG035F Dissolved Mercury	WATER - EG050G-F Dissolved Hexavalent Chromium	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity	WATER - NT-08 Total Nitrogen + NO2 + NO3 + NH3 + Total P
EM2010819-001	25-Jun-2020 13:30	MW001_200625	▯	▯	▯	▯	▯	▯	▯

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EK025SF Free CN By Segmented Flow Analyser	WATER - EK026SF Total Cyanide by Segmented Flow Analyser	WATER - EP074L MTBE Methyl tert-Butyl Ether (MTBE)	WATER - EP074-WF ADWG 2011 Low Level VOC incl. DCM, VC 0.2ug/L,	WATER - EP204 Glyphosate and AMPA	WATER - MM514 E.coli & Total Coliforms by MPN Colilert	WATER - W-04 TRH/BTEXN
EM2010819-001	25-Jun-2020 13:30	MW001_200625	▯	▯	▯	▯	▯	▯	▯
EM2010819-002	25-Jun-2020 00:00	RB_200625				▯			

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EP010 Formaldehyde	WATER - EP075C Phthalates SVOC - Phthalate Esters	WATER - EP201 Carbamates	WATER - EP202SL Phenoxyacetic Acid	WATER - EP233 Acrylamide by LC-MSMS	WATER - W-13 OC/OP/PCB	WATER - W-14 PAH/Phenols (SVOC)
EM2010819-001	25-Jun-2020 13:30	MW001_200625	▯	▯	▯	▯	▯	▯	▯

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - EG020T Total Metals by ICP/MS (including digestion)	WATER - EG035T Total Mercury	WATER - EG050G-T Total Hexavalent Chromium	WATER - EP094 Synthetic Pyrethroids by GCMS	WATER - W-24 TRH/BTEXN/PAH/Phenols	WATER - WP125_S1 Solvents in Water 1	WATER - WP125_S4 Solvents in Water 4
EM2010819-001	25-Jun-2020 13:30	MW001_200625				▯		▯	▯
EM2010819-002	25-Jun-2020 00:00	RB_200625	▯	▯	▯		▯		

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) WATER No analysis requested	WATER - W-18 TRH(C6 - C9)/BTEXN
EM2010819-003	15-Jun-2020 00:00	TB01_200625	▯	
EM2010819-004	25-Jun-2020 14:00	FB_200625		▯

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **WATER**

Evaluation: = Holding time breach ; ▯ = Within holding time.

Method / **Client Sample ID(s)**	**Container**	**Due for extraction**	**Due for analysis**	**Samples Received**		**Instructions Received**	
				Date	**Evaluation**	**Date**	**Evaluation**
EA005-P: pH by PC Titrator							
MW001_200625	Clear Plastic Bottle - Natural	----	25-Jun-2020	26-Jun-2020		----	----

Requested Deliverables

ASH METAGESHA

- *AU Certificate of Analysis - NATA (COA)	Email	ash.metagesha@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	ash.metagesha@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	ash.metagesha@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	ash.metagesha@jacobs.com
- Chain of Custody (CoC) (COC)	Email	ash.metagesha@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	ash.metagesha@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	ash.metagesha@jacobs.com

ESDAT LSPECS

- EDI Format - ESDAT (ESDAT)	Email	labresults@jacobs.com

JACOB TAYLOR

- *AU Certificate of Analysis - NATA (COA)	Email	Jacob.Taylor@jacobs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Jacob.Taylor@jacobs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Jacob.Taylor@jacobs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Jacob.Taylor@jacobs.com
- Chain of Custody (CoC) (COC)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ENMRG (ENMRG)	Email	Jacob.Taylor@jacobs.com
- EDI Format - ESDAT (ESDAT)	Email	Jacob.Taylor@jacobs.com

JACOBS RESULTS

- EDI Format - ESDAT (ESDAT)	Email	jacobs.labresults@esdat.net

KATE MUNRO

- A4 - AU Tax Invoice (INV)	Email	kate.munro@jacobs.com

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2010819**	Page	: 1 of 17
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 26-Jun-2020 11:00
Order number	: 1578	Date Analysis Commenced	: 26-Jun-2020
C-O-C number	: ----	Issue Date	: 07-Jul-2020 15:16
Sampler	: EM/AM		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 4		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

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

Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Minh Wills	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Samantha Smith	Laboratory Coordinator	WRG Subcontracting, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

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

- EP233: Poor matrix spike recovery for particular compounds due to matrix interferences.
- EP202: Poor matrix spike recoveries for Picloram and Clopyralid due to matrix effects.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Ionic balances were calculated using: major anions - chloride, alkalinity and sulfate; and major cations - calcium, magnesium, potassium and sodium.
- ED045G: The presence of thiocyanate can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.
- EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- E.coli & Total Coliforms by MPN (MM514) is conducted by ALS Scoresby NATA accreditation no. 992, site no. 989.
- Solvents (CM051_S) is conducted by ALS Scoresby NATA accreditation no. 992, site no. 989.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.25**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**3870**	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**608**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**608**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**381**	----	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**1680**	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**49**	----	----	----	----
Magnesium	7439-95-4	1	mg/L	**102**	----	----	----	----
Sodium	7440-23-5	1	mg/L	**1240**	----	----	----	----
Potassium	7440-09-7	1	mg/L	**20**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	**0.002**	----	----	----	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	----	----	----	----
Barium	7440-39-3	0.001	mg/L	**0.015**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	**0.006**	----	----	----	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	**0.004**	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	**0.001**	----	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	**0.002**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	**0.016**	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----
Silver	7440-22-4	0.001	mg/L	**0.003**	----	----	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.034**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EG020F: Dissolved Metals by ICP-MS - Continued								
Boron	7440-42-8	0.05	mg/L	**1.50**	----	----	----	----
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	----	----	----
Beryllium	7440-41-7	0.001	mg/L	----	<0.001	----	----	----
Barium	7440-39-3	0.001	mg/L	----	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	----	<0.001	----	----	----
Cobalt	7440-48-4	0.001	mg/L	----	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	----	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	----	<0.001	----	----	----
Manganese	7439-96-5	0.001	mg/L	----	<0.001	----	----	----
Molybdenum	7439-98-7	0.001	mg/L	----	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	----	<0.001	----	----	----
Selenium	7782-49-2	0.01	mg/L	----	<0.01	----	----	----
Silver	7440-22-4	0.001	mg/L	----	<0.001	----	----	----
Tin	7440-31-5	0.001	mg/L	----	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	----	<0.005	----	----	----
Boron	7440-42-8	0.05	mg/L	----	<0.05	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	----	----	----
EG050F: Dissolved Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.01	mg/L	**0.01**	----	----	----	----
EG050T: Total Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.01	mg/L	----	<0.01	----	----	----
EK025SF: Free CN by Segmented Flow Analyser								
Free Cyanide	----	0.004	mg/L	<0.004	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	0.004	mg/L	<0.004	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.02**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								

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				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EK057G: Nitrite as N by Discrete Analyser - Continued								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**10.2**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**10.2**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.1**	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**11.3**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**0.02**	----	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**67.5**	----	----	----	----
ø Total Cations	----	0.01	meq/L	**65.3**	----	----	----	----
ø Ionic Balance	----	0.01	%	**1.64**	----	----	----	----
EP010: Formaldehyde								
Formaldehyde	50-00-0	0.1	mg/L	<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
^ Total Polychlorinated biphenyls	----	1	µg/L	<1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	µg/L	<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	µg/L	<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	µg/L	<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	µg/L	<0.5	----	----	----	----
Aldrin	309-00-2	0.5	µg/L	<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	----	----	----	----
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	----	----	----	----
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	µg/L	<0.5	----	----	----	----
Endrin	72-20-8	0.5	µg/L	<0.5	----	----	----	----

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Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
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				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	µg/L	<0.5	----	----	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	----	----	----	----
4.4`-DDT	50-29-3	2.0	µg/L	<2.0	----	----	----	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	----	----	----	----
Methoxychlor	72-43-5	2.0	µg/L	<2.0	----	----	----	----
^ Total Chlordane (sum)	----	0.5	µg/L	<0.5	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	<0.5	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	----	----	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	----	----	----	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	----	----	----	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	----	----	----	----
Diazinon	333-41-5	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	----	----	----	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	----	----	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	----	----	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	----	----	----	----
Parathion	56-38-2	2.0	µg/L	<2.0	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	----	----	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	----	----	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	----	----	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	----	----	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	----	----	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	1	µg/L	<1	<1	----	----	----
Ethylbenzene	100-41-4	1	µg/L	<1	<1	----	----	----

Analytical Results

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				Result	Result	Result	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	<1	----	----	----
Styrene	100-42-5	1	µg/L	<1	<1	----	----	----
ortho-Xylene	95-47-6	1	µg/L	<1	<1	----	----	----
Isopropylbenzene	98-82-8	1	µg/L	<1	<1	----	----	----
n-Propylbenzene	103-65-1	1	µg/L	<1	<1	----	----	----
1.3.5-Trimethylbenzene	108-67-8	1	µg/L	<1	<1	----	----	----
sec-Butylbenzene	135-98-8	1	µg/L	<1	<1	----	----	----
1.2.4-Trimethylbenzene	95-63-6	1	µg/L	<1	<1	----	----	----
tert-Butylbenzene	98-06-6	1	µg/L	<1	<1	----	----	----
p-Isopropyltoluene	99-87-6	1	µg/L	<1	<1	----	----	----
n-Butylbenzene	104-51-8	1	µg/L	<1	<1	----	----	----
^ Total Xylenes	----	1	µg/L	<1	<1	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	10	µg/L	<10	<10	----	----	----
2-Butanone (MEK)	78-93-3	10	µg/L	<10	<10	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	10	µg/L	<10	<10	----	----	----
2-Hexanone (MBK)	591-78-6	10	µg/L	<10	<10	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	1	µg/L	<1	<1	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	1	µg/L	<1	<1	----	----	----
1.2-Dichloropropane	78-87-5	1	µg/L	<1	<1	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	2	µg/L	<2	<2	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	2	µg/L	<2	<2	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	1	µg/L	<1	<1	----	----	----
^ 1.3-Dichloropropylene (cis & trans)	----	2	µg/L	<2	<2	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	10	µg/L	<10	<10	----	----	----
Chloromethane	74-87-3	10	µg/L	<10	<10	----	----	----
Vinyl chloride	75-01-4	0.2	µg/L	<0.2	<0.2	----	----	----
Bromomethane	74-83-9	10	µg/L	<10	<10	----	----	----
Chloroethane	75-00-3	10	µg/L	<10	<10	----	----	----
Trichlorofluoromethane	75-69-4	10	µg/L	<10	<10	----	----	----
1.1-Dichloroethene	75-35-4	1	µg/L	<1	<1	----	----	----

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Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
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				Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued								
Iodomethane	74-88-4	1	µg/L	<1	<1	----	----	----
Methylene chloride	75-09-2	2	µg/L	<2	<2	----	----	----
trans-1.2-Dichloroethene	156-60-5	1	µg/L	<1	<1	----	----	----
1.1-Dichloroethane	75-34-3	1	µg/L	<1	<1	----	----	----
cis-1.2-Dichloroethene	156-59-2	1	µg/L	<1	<1	----	----	----
1.1.1-Trichloroethane	71-55-6	1	µg/L	<1	<1	----	----	----
1.1-Dichloropropylene	563-58-6	1	µg/L	<1	<1	----	----	----
Carbon Tetrachloride	56-23-5	1	µg/L	<1	<1	----	----	----
1.2-Dichloroethane	107-06-2	1	µg/L	<1	<1	----	----	----
Trichloroethene	79-01-6	1	µg/L	<1	<1	----	----	----
Dibromomethane	74-95-3	1	µg/L	<1	<1	----	----	----
1.1.2-Trichloroethane	79-00-5	1	µg/L	<1	<1	----	----	----
1.3-Dichloropropane	142-28-9	1	µg/L	<1	<1	----	----	----
Tetrachloroethene	127-18-4	1	µg/L	<1	<1	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	1	µg/L	<1	<1	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	1	µg/L	<1	<1	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	1	µg/L	<1	<1	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	1	µg/L	<1	<1	----	----	----
1.2.3-Trichloropropane	96-18-4	1	µg/L	<1	<1	----	----	----
Pentachloroethane	76-01-7	1	µg/L	<1	<1	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	1	µg/L	<1	<1	----	----	----
Hexachlorobutadiene	87-68-3	0.5	µg/L	<0.5	<0.5	----	----	----
Bromochloromethane	74-97-5	1	µg/L	<1	<1	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	1	µg/L	<1	<1	----	----	----
Bromobenzene	108-86-1	1	µg/L	<1	<1	----	----	----
2-Chlorotoluene	95-49-8	1	µg/L	<1	<1	----	----	----
4-Chlorotoluene	106-43-4	1	µg/L	<1	<1	----	----	----
1.3-Dichlorobenzene	541-73-1	1	µg/L	<1	<1	----	----	----
1.4-Dichlorobenzene	106-46-7	0.1	µg/L	<0.1	<0.1	----	----	----
1.2-Dichlorobenzene	95-50-1	1	µg/L	<1	<1	----	----	----
1.2.4-Trichlorobenzene	120-82-1	1	µg/L	<1	<1	----	----	----
1.2.3-Trichlorobenzene	87-61-6	1	µg/L	<1	<1	----	----	----
^ Sum of Trichlorobenzenes	----	1	µg/L	<1	<1	----	----	----

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Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
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				Result	Result	Result	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	1	µg/L	<1	<1	----	----	----
Bromodichloromethane	75-27-4	1	µg/L	<1	<1	----	----	----
Dibromochloromethane	124-48-1	1	µg/L	<1	<1	----	----	----
Bromoform	75-25-2	1	µg/L	<1	<1	----	----	----
^ Total Trihalomethanes	----	1	µg/L	<1	<1	----	----	----
EP074H: Naphthalene								
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP074L: Fuel Oxygenates								
Methyl tert-butyl ether (MTBE)	1634-04-4	1	µg/L	<1	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	----	<1.0	----	----	----
2-Chlorophenol	95-57-8	1.0	µg/L	----	<1.0	----	----	----
2-Methylphenol	95-48-7	1.0	µg/L	----	<1.0	----	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	----	<2.0	----	----	----
2-Nitrophenol	88-75-5	1.0	µg/L	----	<1.0	----	----	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L	----	<1.0	----	----	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L	----	<1.0	----	----	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L	----	<1.0	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L	----	<1.0	----	----	----
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L	----	<1.0	----	----	----
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L	----	<1.0	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L	----	<2.0	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	----	<1.0	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	----	<1.0	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	----	<1.0	----	----	----
Fluorene	86-73-7	1.0	µg/L	----	<1.0	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	----	<1.0	----	----	----
Anthracene	120-12-7	1.0	µg/L	----	<1.0	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	----	<1.0	----	----	----
Pyrene	129-00-0	1.0	µg/L	----	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	----	<1.0	----	----	----
Chrysene	218-01-9	1.0	µg/L	----	<1.0	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	----	<1.0	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
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				Result	Result	Result	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	----	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	----	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	----	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	----	<1.0	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	----	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	----	<0.5	----	----	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	2	µg/L	<2	----	----	----	----
2-Chlorophenol	95-57-8	2	µg/L	<2	----	----	----	----
2-Methylphenol	95-48-7	2	µg/L	<2	----	----	----	----
3- & 4-Methylphenol	1319-77-3	2	µg/L	<2	----	----	----	----
2-Nitrophenol	88-75-5	2	µg/L	<2	----	----	----	----
2.4-Dimethylphenol	105-67-9	2	µg/L	<2	----	----	----	----
2.4-Dichlorophenol	120-83-2	2	µg/L	<2	----	----	----	----
2.6-Dichlorophenol	87-65-0	2	µg/L	<2	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	2	µg/L	<2	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	2	µg/L	<2	----	----	----	----
Pentachlorophenol	87-86-5	4	µg/L	<4	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	2	µg/L	<2	----	----	----	----
2-Methylnaphthalene	91-57-6	2	µg/L	<2	----	----	----	----
2-Chloronaphthalene	91-58-7	2	µg/L	<2	----	----	----	----
Acenaphthylene	208-96-8	2	µg/L	<2	----	----	----	----
Acenaphthene	83-32-9	2	µg/L	<2	----	----	----	----
Fluorene	86-73-7	2	µg/L	<2	----	----	----	----
Phenanthrene	85-01-8	2	µg/L	<2	----	----	----	----
Anthracene	120-12-7	2	µg/L	<2	----	----	----	----
Fluoranthene	206-44-0	2	µg/L	<2	----	----	----	----
Pyrene	129-00-0	2	µg/L	<2	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	----	----	----	----
Benz(a)anthracene	56-55-3	2	µg/L	<2	----	----	----	----
Chrysene	218-01-9	2	µg/L	<2	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
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				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	----	----	----	----
Benzo(a)pyrene	50-32-8	2	µg/L	<2	----	----	----	----
3-Methylcholanthrene	56-49-5	2	µg/L	<2	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L	<2	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	2	µg/L	<2	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	2	µg/L	<2	----	----	----	----
^ Sum of PAHs	----	2	µg/L	<2	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	----	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	2	µg/L	<2	----	----	----	----
Diethyl phthalate	84-66-2	2	µg/L	<2	----	----	----	----
Di-n-butyl phthalate	84-74-2	2	µg/L	<2	----	----	----	----
Butyl benzyl phthalate	85-68-7	2	µg/L	<2	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	----	----	----	----
Di-n-octylphthalate	117-84-0	2	µg/L	<2	----	----	----	----
Di (2-ethylhexyl) adipate	103-23-1	2	µg/L	<2	----	----	----	----
^ Sum of Phthalates	----	2	µg/L	<2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	<2	----	----
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	----	----
EP094A: Synthetic Pyrethroids								
Bioresmethrin	28434-01-07	0.5	µg/L	<0.5	----	----	----	----
Bifenthrin	82657-04-3	0.5	µg/L	<0.5	----	----	----	----
Phenothrin	26002-80-2	0.5	µg/L	<0.5	----	----	----	----
Lambda-cyhalothrin	68085-85-8	0.5	µg/L	<0.5	----	----	----	----
Permethrin	52645-53-1	0.5	µg/L	<0.5	----	----	----	----
Cyfluthrin	68359-37-5	0.5	µg/L	<0.5	----	----	----	----
Cypermethrin	52315-07-8	0.5	µg/L	<0.5	----	----	----	----
Fenvalerate & Esfenvalerate	51630-58-1/66230-04-	0.5	µg/L	<0.5	----	----	----	----
Deltamethrin & Tralomethrin	62229-77-0/66841-25-	0.5	µg/L	<0.5	----	----	----	----
Allethrin	584-79-2	0.5	µg/L	<0.5	----	----	----	----
Transfluthrin	118712-89-3	0.5	µg/L	<0.5	----	----	----	----
Tau-fluvalinate	102851-06-9	0.5	µg/L	<0.5	----	----	----	----
Tetramethrin	7696-12-0	0.5	µg/L	<0.5	----	----	----	----
EP094B: Synergist								
Piperonyl Butoxide	63993-73-7	0.5	µg/L	<0.5	----	----	----	----
EP201: Carbamate Pesticides by LCMS								
Oxamyl	23135-22-0	0.2	µg/L	<0.2	----	----	----	----
Methomyl	16752-77-5	0.2	µg/L	<0.2	----	----	----	----
3-Hydroxy Carbofuran	16655-82-6	0.2	µg/L	<0.2	----	----	----	----
Aldicarb	116-06-3	0.2	µg/L	<0.2	----	----	----	----
Bendiocarb	22781-23-3	0.2	µg/L	<0.2	----	----	----	----
Thiodicarb	59669-26-0	0.2	µg/L	<0.2	----	----	----	----
Carbofuran	1563-66-2	0.2	µg/L	<0.2	----	----	----	----
Carbaryl	63-25-2	0.2	µg/L	<0.2	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EP201: Carbamate Pesticides by LCMS - Continued								
Methiocarb	2032-65-7	0.2	µg/L	<0.2	----	----	----	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	----	----	----	----
2.4-DB	94-82-6	10	µg/L	<10	----	----	----	----
Dicamba	1918-00-9	10	µg/L	<10	----	----	----	----
Mecoprop	93-65-2	10	µg/L	<10	----	----	----	----
MCPA	94-74-6	10	µg/L	<10	----	----	----	----
2.4-DP	120-36-5	10	µg/L	<10	----	----	----	----
2.4-D	94-75-7	10	µg/L	<10	----	----	----	----
Triclopyr	55335-06-3	10	µg/L	<10	----	----	----	----
Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	----	----	----	----
2.4.5-T	93-76-5	10	µg/L	<10	----	----	----	----
MCPB	94-81-5	10	µg/L	<10	----	----	----	----
Picloram	1918-02-1	10	µg/L	<10	----	----	----	----
Clopyralid	1702-17-6	10	µg/L	<10	----	----	----	----
Fluroxypyr	69377-81-7	10	µg/L	<10	----	----	----	----
2.6-D	575-90-6	10	µg/L	<10	----	----	----	----
2.4.6-T	575-89-3	10	µg/L	<10	----	----	----	----
EP204: Glyphosate and AMPA								
Glyphosate	1071-83-6	10	µg/L	<10	----	----	----	----
AMPA	1066-51-9	10	µg/L	<10	----	----	----	----
EP233: Acrylamide								
Acrylamide	79-06-1	0.2	µg/L	<0.2	----	----	----	----
MM514: E.coli & Total Coliforms MPN by Colilert								
Escherichia coli (Colilert)	----	1	orgs/100mL	**0**	----	----	----	----
WP125: Miscellaneous Alcohols & Solvents								
1-heptene	592-76-7	0.004	mg/L	<0.004	----	----	----	----
Butyl acetate	123-86-4	0.02	mg/L	<0.02	----	----	----	----
Cyclohexene	110-83-8	0.004	mg/L	<0.004	----	----	----	----
Cyclopentene	142-29-0	0.004	mg/L	<0.004	----	----	----	----
Ethyl Acetate	141-78-6	0.02	mg/L	<0.02	----	----	----	----
EP066S: PCB Surrogate								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EP066S: PCB Surrogate - Continued								
Decachlorobiphenyl	2051-24-3	1	%	71.7	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	81.7	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	89.2	----	----	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	1	%	104	98.5	----	----	----
Toluene-D8	2037-26-5	1	%	101	87.8	----	----	----
4-Bromofluorobenzene	460-00-4	1	%	110	101	----	----	----
1.2-Dichloroethane-D4	17060-07-0	5	%	104	----	----	----	----
Toluene-D8	2037-26-5	5	%	101	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%	110	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	----	29.5	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	----	88.2	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%	----	65.1	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	----	73.5	----	----	----
Anthracene-d10	1719-06-8	1.0	%	----	73.2	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	----	83.0	----	----	----
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	2	%	25.8	----	----	----	----
Phenol-d6	13127-88-3	2	%	23.6	----	----	----	----
2-Chlorophenol-D4	93951-73-6	2	%	59.1	----	----	----	----
2.4.6-Tribromophenol	118-79-6	2	%	50.1	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	2	%	56.7	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	2	%	47.0	----	----	----	----
2-Fluorobiphenyl	321-60-8	2	%	47.4	----	----	----	----
Anthracene-d10	1719-06-8	2	%	80.1	----	----	----	----
4-Terphenyl-d14	1718-51-0	2	%	84.4	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	96.4	91.0	98.4	----	----
Toluene-D8	2037-26-5	2	%	97.4	84.7	103	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				MW001_200625	RB_200625	FB_200625	----	----
				25-Jun-2020 13:30	25-Jun-2020 00:00	25-Jun-2020 14:00	----	----
				EM2010819-001	EM2010819-002	EM2010819-004	--------	--------
				Result	Result	Result	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	2	%	**124**	**114**	**126**	**----**	**----**
EP094S: Pesticide Surrogate								
DEF	78-48-8	0.5	%	**86.6**	**----**	**----**	**----**	**----**
EP201S: Carbamate Surrogate								
4-Bromo-3.5-dimethylphenyl-N-methylcarbamate	672-99-1	0.2	%	**96.1**	**----**	**----**	**----**	**----**
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	**90.9**	**----**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
		Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	45	134
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	67	111
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	67	111
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	120
Toluene-D8	2037-26-5	70	130
4-Bromofluorobenzene	460-00-4	70	128
1.2-Dichloroethane-D4	17060-07-0	72	132
Toluene-D8	2037-26-5	77	132
4-Bromofluorobenzene	460-00-4	67	131
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	46
2-Chlorophenol-D4	93951-73-6	23	104
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	10	117
Phenol-d6	13127-88-3	10	69
2-Chlorophenol-D4	93951-73-6	21	130
2.4.6-Tribromophenol	118-79-6	10	151
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	29	142
1.2-Dichlorobenzene-D4	2199-69-1	24	121
2-Fluorobiphenyl	321-60-8	27	135
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	21	123
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129
EP094S: Pesticide Surrogate			
DEF	78-48-8	42	143

Sub-Matrix: **WATER**		Recovery Limits (%)	
		Low	High
EP201S: Carbamate Surrogate			
4-Bromo-3.5-dimethylphenyl-N-methy lcarbamate	672-99-1	65	147
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	64	140

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2010819**	Page	: 1 of 15
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 26-Jun-2020
Site	: ----	Issue Date	: 07-Jul-2020
Sampler	: EM/AM	No. of samples received	: 4
Order number	: 1578	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

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

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP202A: Phenoxyacetic Acid Herbicides by LCMS	EM2010819--001	MW001_200625	**Picloram**	1918-02-1	47.2 %	70.0-144%	**Recovery less than lower data quality objective**
EP202A: Phenoxyacetic Acid Herbicides by LCMS	EM2010819--001	MW001_200625	**Clopyralid**	1702-17-6	39.8 %	70.0-145%	**Recovery less than lower data quality objective**
EP233: Acrylamide	EM2010819--001	MW001_200625	**Acrylamide**	79-06-1	18.3 %	70.0-128%	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method	*Extraction / Preparation*			*Analysis*		
Container / Client Sample ID(s)	*Date extracted*	*Due for extraction*	***Days overdue***	*Date analysed*	*Due for analysis*	***Days overdue***
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural						
MW001_200625	----	----	----	01-Jul-2020	25-Jun-2020	**6**
EP010: Formaldehyde						
Clear Plastic Bottle - Natural						
MW001_200625	----	----	----	01-Jul-2020	27-Jun-2020	**4**
EP094A: Synthetic Pyrethroids						
Amber Glass Bottle - Unpreserved						
MW001_200625	03-Jul-2020	02-Jul-2020	**1**	----	----	----
EP094B: Synergist						
Amber Glass Bottle - Unpreserved						
MW001_200625	03-Jul-2020	02-Jul-2020	**1**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Carbamate Pesticides by LCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	0	6	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	1	16	6.25	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Carbamate Pesticides by LCMS	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Matrix Spikes (MS) - Continued					
PAH/Phenols (GC/MS - SIM)	0	6	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **WATER**

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

Method	***Sample Date***	*Extraction / Preparation*			*Analysis*		
Container / *Client Sample ID(s)*		***Date extracted***	*Due for extraction*	*Evaluation*	***Date analysed***	*Due for analysis*	*Evaluation*
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	25-Jun-2020	×
EA015: Total Dissolved Solids dried at 180 ± 5 °C							
Clear Plastic Bottle - Natural (EA015H)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	02-Jul-2020	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	09-Jul-2020	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020B-F)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**30-Jun-2020**	22-Dec-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020B-T)							
RB_200625	**25-Jun-2020**	**01-Jul-2020**	22-Dec-2020	✓	**01-Jul-2020**	22-Dec-2020	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**30-Jun-2020**	23-Jul-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RB_200625	**25-Jun-2020**	**----**	----	----	**30-Jun-2020**	23-Jul-2020	✓
EG050F: Dissolved Hexavalent Chromium							
Clear Plastic Bottle - NaOH Filtered (EG050G-F)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
EG050T: Total Hexavalent Chromium							
Clear Plastic Bottle - NaOH (EG050G-T)							
RB_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
EK025SF: Free CN by Segmented Flow Analyser							
Opaque plastic bottle - NaOH (EK025SF)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	09-Jul-2020	✓
EK026SF: Total CN by Segmented Flow Analyser							
Opaque plastic bottle - NaOH (EK026SF)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	09-Jul-2020	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**02-Jul-2020**	23-Jul-2020	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**27-Jun-2020**	27-Jun-2020	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	23-Jul-2020	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
MW001_200625	**25-Jun-2020**	**02-Jul-2020**	23-Jul-2020	✓	**02-Jul-2020**	23-Jul-2020	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
MW001_200625	**25-Jun-2020**	**02-Jul-2020**	23-Jul-2020	✓	**02-Jul-2020**	23-Jul-2020	✓
EP010: Formaldehyde							
Clear Plastic Bottle - Natural (EP010)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**01-Jul-2020**	27-Jun-2020	×

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)							
Amber Glass Bottle - Unpreserved (EP066) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074B: Oxygenated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074C: Sulfonated Compounds							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074H: Naphthalene							
Amber VOC Vial - Sulfuric Acid (EP074-WF) MW001_200625, RB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP074L: Fuel Oxygenates							
Amber VOC Vial - Sulfuric Acid (EP074) MW001_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RB_200625	**25-Jun-2020**	**30-Jun-2020**	02-Jul-2020	✓	**01-Jul-2020**	09-Aug-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RB_200625	**25-Jun-2020**	**30-Jun-2020**	02-Jul-2020	✓	**01-Jul-2020**	09-Aug-2020	✓
EP075A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP075C: Phthalate Esters							
Amber Glass Bottle - Unpreserved (EP075) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
Amber Glass Bottle - Unpreserved (EP071) RB_200625	**25-Jun-2020**	**30-Jun-2020**	02-Jul-2020	✓	**01-Jul-2020**	09-Aug-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) MW001_200625, RB_200625, FB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) MW001_200625	**25-Jun-2020**	**02-Jul-2020**	02-Jul-2020	✓	**03-Jul-2020**	11-Aug-2020	✓
Amber Glass Bottle - Unpreserved (EP071) RB_200625	**25-Jun-2020**	**30-Jun-2020**	02-Jul-2020	✓	**01-Jul-2020**	09-Aug-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) MW001_200625, RB_200625, FB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) MW001_200625, RB_200625, FB_200625	**25-Jun-2020**	**01-Jul-2020**	09-Jul-2020	✓	**02-Jul-2020**	09-Jul-2020	✓
EP094A: Synthetic Pyrethroids							
Amber Glass Bottle - Unpreserved (EP094) MW001_200625	**25-Jun-2020**	**03-Jul-2020**	02-Jul-2020	×	**03-Jul-2020**	12-Aug-2020	✓
EP094B: Synergist							
Amber Glass Bottle - Unpreserved (EP094) MW001_200625	**25-Jun-2020**	**03-Jul-2020**	02-Jul-2020	×	**03-Jul-2020**	12-Aug-2020	✓
EP201: Carbamate Pesticides by LCMS							
Amber Bottle Unpreserved for Specialist Organics (EP201) MW001_200625	**25-Jun-2020**	**----**	----	----	**02-Jul-2020**	02-Jul-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP202A: Phenoxyacetic Acid Herbicides by LCMS							
Amber Bottle Unpreserved for Specialist Organics (EP202-SL)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**02-Jul-2020**	02-Jul-2020	✓
EP204: Glyphosate and AMPA							
Amber Bottle Unpreserved for Specialist Organics (EP204)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**03-Jul-2020**	09-Jul-2020	✓
EP233: Acrylamide							
Amber Bottle Unpreserved for Specialist Organics (EP233)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**02-Jul-2020**	02-Jul-2020	✓
MM514: E.coli & Total Coliforms MPN by Colilert							
Sterile Plastic Bottle - Sodium Thiosulfate (MM514)							
MW001_200625	**25-Jun-2020**	**----**	----	----	**26-Jun-2020**	26-Jun-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Acrylamide	EP233	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Alkalinity by PC Titrator	ED037-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	0	1	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Glyphosate and AMPA	EP204	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Dissolved	EG050G-F	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	6	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
pH by PC Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202-SL	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	1	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	0	2	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	0	1	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite B	EG020B-T	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds WF Detection Limits	EP074-WF	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
Acrylamide	EP233	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Alkalinity by PC Titrator	ED037-P	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Glyphosate and AMPA	EP204	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Dissolved	EG050G-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202-SL	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite B	EG020B-T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds WF Detection Limits	EP074-WF	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Acrylamide	EP233	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Glyphosate and AMPA	EP204	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Dissolved	EG050G-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202-SL	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite B	EG020B-T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds WF Detection Limits	EP074-WF	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Acrylamide	EP233	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Carbamate Pesticides by LCMS	EP201	0	1	**0.00**	**5.00**	✗	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	0	1	**0.00**	**5.00**	✗	NEPM 2013 B3 & ALS QC Standard
Free CN by Segmented Flow Analyser	EK025SF	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Glyphosate and AMPA	EP204	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Dissolved	EG050G-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	6	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202-SL	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Synthetic Pyrethroids by GCMS	EP094	0	1	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Cyanide by Segmented Flow Analyser	EK026SF	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds WF Detection Limits	EP074-WF	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
pH by PC Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM (2013) Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of `filterable` residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM (2013) Schedule B(3)
Alkalinity by PC Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM (2013) Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM (2013) Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM (2013) Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (2013) Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM (2013) Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Metals by ICP-MS - Suite B	EG020B-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.

Analytical Methods	Method	Matrix	Method Descriptions
Total Metals by ICP-MS - Suite B	EG020B-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Discrete Analyser - Dissolved	EG050G-F	WATER	In house: Referenced to APHA 3500 Cr-A & B. Samples are 0.45µm filtered prior to analysis. Hexavalent chromium is determined directly on water sample by Descrete Analyser as received by pH adjustment and colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	WATER	In house: Referenced to APHA 3500 Cr-A & B. Hexavalent chromium is determined directly on water sample by Descrete Analyser as received by pH adjustment and colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Free CN by Segmented Flow Analyser	EK025SF	WATER	In house: Referenced to ASTM D7237: Using an automated segmented flow analyser, a sample at high pH (sodium hydroxide preserved) is buffered to pH 6.0. The hydrogen cyanide present passes across a gas dialysis membrane into an acceptor stream consisting of 0.01 M sodium hydroxide. The acceptor stream mixes with a buffer at pH 5.2 and reacts with chloramine-T to form cyanogen chloride. Cyanogen chloride reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour, measured at 600nm. This method is compliant with NEPM (2013) Schedule B(3)
Total Cyanide by Segmented Flow Analyser	EK026SF	WATER	In house: Referenced to APHA 4500-CN C / ASTM D7511. Sodium hydroxide preserved samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (2013) Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM (2013) Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM (2013) Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al (1976), Zhang et al (2006). This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM (2013) Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM (2013) Schedule B(3)
Formaldehyde	EP010	WATER	In house: Referenced to ASTM D 6303-98. s
Polychlorinated Biphenyls (PCB)	EP066	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260D Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Volatile Organic Compounds WF Detection Limits	EP074-WF	WATER	In house: Referenced to USEPA SW 846 - 8260D Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Semivolatile Organic Compounds	EP075	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260D Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
Synthetic Pyrethroids by GCMS	EP094	WATER	In house: Referenced to USEPA SW 846 - 8270E Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Carbamate Pesticides by LCMS	EP201	WATER	In house: LCMS (Electrospray in positive mode). Residues of carbamates in water are concentrated on a solid phase extraction cartridge. The compounds are then eluted with 10%methanol in MTBE. The extract is evaporated to nearly dryness and reconstitued in HPLC mobile phase for LC/MS determination.
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202-SL	WATER	In house: LCMS (Electrospray in negative mode). After adding surrogate and acetic acid, water samples are injected on a C18 column for LC/MS determination.
Glyphosate and AMPA	EP204	WATER	In house: Pre-column derivatisation LCMS (ES in negative mode). Water samples are derivatised with 9-fluorenyl methoxycarbonyl chloroformate (FMOC) in alkaline condition. The derivatives of glyphosate and AMPA are separated by a C8 column and determined by MS.
Acrylamide	EP233	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Quantification is via internal standardisation using the deuterated analogue.
E.coli & Total Coliforms by MPN Colilert	MM514	WATER	Microbiological analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992).
Solvents in Water 1	WP125	WATER	Specialist organic analysis subcontracted to ALS Scoresby (NATA Accredited Laboratory No. 992). NATA accreditation does not cover the following analytes: 1-hepten, Butyl acetate, Cyclohexene, Cyclopentene & Methy iso-Butyl ketone.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM (2013) Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2010819**	Page	: 1 of 20
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 26-Jun-2020
Order number	: 1578	Date Analysis Commenced	: 26-Jun-2020
C-O-C number	: ----	Issue Date	: 07-Jul-2020
Sampler	: EM/AM		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 4		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

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

Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
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General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA005P: pH by PC Titrator (QC Lot: 3111732)									
EM2010863-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	6.09	6.14	0.818	0% - 20%
EM2010838-005	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	6.81	6.81	0.00	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 3111745)									
EM2010783-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	769	832	7.87	0% - 20%
EM2010783-010	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	<10	0.00	No Limit
ED037P: Alkalinity by PC Titrator (QC Lot: 3111731)									
EM2010772-024	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	714	711	0.410	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	714	711	0.410	0% - 20%
EM2010772-034	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	244	248	1.62	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	244	248	1.62	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 3111492)									
EM2011137-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	62	52	17.6	0% - 20%
EM2010819-001	MW001_200625	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	381	392	2.85	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 3111493)									
EM2011137-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	1480	1460	1.54	0% - 20%
EM2010819-001	MW001_200625	ED045G: Chloride	16887-00-6	1	mg/L	1680	1670	0.578	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 3111212)									
EM2010838-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	176	173	1.48	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	369	363	1.61	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	2630	2640	0.0833	0% - 20%

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
ED093F: Dissolved Major Cations (QC Lot: 3111212) - continued									
EM2010838-001	Anonymous	ED093F: Potassium	7440-09-7	1	mg/L	87	87	0.00	0% - 20%
EM2010843-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	104	106	1.58	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	475	482	1.42	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	2770	2790	0.774	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	50	51	0.00	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3111209)									
EM2010782-001	Anonymous	EG020B-F: Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3111211)									
EM2010838-006	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.009	0.011	20.2	0% - 50%
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.035	0.036	3.54	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.002	0.003	0.00	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.003	0.004	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.004	0.005	0.00	No Limit
		EG020A-F: Molybdenum	7439-98-7	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.004	0.004	0.00	No Limit
		EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.019	0.022	13.4	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	1.49	1.78	18.1	0% - 20%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.01	0.00	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.08	0.08	0.00	No Limit
EM2010782-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.004	0.004	0.00	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.108	0.109	0.00	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.490	0.493	0.520	0% - 20%
		EG020A-F: Molybdenum	7439-98-7	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.006	19.2	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.01	0.01	0.00	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.58	0.56	1.90	0% - 50%

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 3111424)									
EM2010805-017	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.04	0.03	0.00	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.00	No Limit
EM2011082-008	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.017	0.018	0.00	0% - 50%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.011	0.011	0.00	0% - 50%
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	0.019	0.019	0.00	0% - 50%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.007	0.007	0.00	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.027	0.027	0.00	0% - 20%
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.014	0.014	0.00	0% - 50%
		EG020A-T: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.019	0.018	0.00	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	6.02	5.93	1.48	0% - 20%
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.00	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 3111425)									
EM2010819-002	RB_200625	EG020B-T: Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EM2011190-002	Anonymous	EG020B-T: Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3111210)									
EM2010838-006	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EM2010782-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3111135)									
EM2010819-002	RB_200625	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3111135) - continued									
EM2011114-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EG050F: Dissolved Hexavalent Chromium (QC Lot: 3113126)									
EM2010819-001	MW001_200625	EG050G-F: Hexavalent Chromium	18540-29-9	0.01	mg/L	0.01	0.01	0.00	No Limit
EM2011152-010	Anonymous	EG050G-F: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EG050T: Total Hexavalent Chromium (QC Lot: 3113119)									
EM2010819-002	RB_200625	EG050G-T: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EM2011129-005	Anonymous	EG050G-T: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK025SF: Free CN by Segmented Flow Analyser (QC Lot: 3112179)									
EM2010819-001	MW001_200625	EK025SF: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.00	No Limit
EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 3112180)									
EM2010819-001	MW001_200625	EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	<0.004	0.00	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 3111991)									
EM2011124-004	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.29	0.30	0.00	0% - 20%
EM2010819-001	MW001_200625	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.02	<0.01	74.4	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 3111491)									
EM2011137-004	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EM2010945-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 3111992)									
EM2011137-004	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EM2010819-001	MW001_200625	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	10.2	10.0	1.14	0% - 20%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 3111882)									
EM2010819-001	MW001_200625	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	1.1	1.1	0.00	0% - 50%
EM2010838-010	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	0.2	0.00	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 3111881)									
EM2010819-001	MW001_200625	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.02	0.02	0.00	No Limit
EM2010838-010	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EP010: Formaldehyde (QC Lot: 3113323)									
EM2010819-001	MW001_200625	EP010: Formaldehyde	50-00-0	0.1	mg/L	<0.1	<0.1	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Toluene	108-88-3	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Ethylbenzene	100-41-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Styrene	100-42-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: ortho-Xylene	95-47-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Isopropylbenzene	98-82-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: n-Propylbenzene	103-65-1	1	µg/L	<1	<1	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3111421) - continued									
EM2010819-001	MW001_200625	EP074-WF: 1.3.5-Trimethylbenzene	108-67-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: sec-Butylbenzene	135-98-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2.4-Trimethylbenzene	95-63-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: tert-Butylbenzene	98-06-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: p-Isopropyltoluene	99-87-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: n-Butylbenzene	104-51-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Total Xylenes	----	1	µg/L	<1	<1	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Vinyl Acetate	108-05-4	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: 2-Butanone (MEK)	78-93-3	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: 4-Methyl-2-pentanone (MIBK)	108-10-1	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: 2-Hexanone (MBK)	591-78-6	10	µg/L	<10	<10	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Carbon disulfide	75-15-0	1	µg/L	<1	<1	0.00	No Limit
EP074D: Fumigants (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: 2.2-Dichloropropane	594-20-7	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2-Dichloropropane	78-87-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2-Dibromoethane (EDB)	106-93-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: cis-1.3-Dichloropropylene	10061-01-5	2	µg/L	<2	<2	0.00	No Limit
		EP074-WF: trans-1.3-Dichloropropylene	10061-02-6	2	µg/L	<2	<2	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Vinyl chloride	75-01-4	0.2	µg/L	<0.2	<0.2	0.00	No Limit
		EP074-WF: Hexachlorobutadiene	87-68-3	0.5	µg/L	<0.5	<0.5	0.00	No Limit
		EP074-WF: 1.1-Dichloroethene	75-35-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Iodomethane	74-88-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: trans-1.2-Dichloroethene	156-60-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1-Dichloroethane	75-34-3	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: cis-1.2-Dichloroethene	156-59-2	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1.1-Trichloroethane	71-55-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1-Dichloropropylene	563-58-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Carbon Tetrachloride	56-23-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2-Dichloroethane	107-06-2	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Trichloroethene	79-01-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Dibromomethane	74-95-3	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1.2-Trichloroethane	79-00-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.3-Dichloropropane	142-28-9	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Tetrachloroethene	127-18-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1.1.2-Tetrachloroethane	630-20-6	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: trans-1.4-Dichloro-2-butene	110-57-6	1	µg/L	<1	<1	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3111421) - continued									
EM2010819-001	MW001_200625	EP074-WF: cis-1.4-Dichloro-2-butene	1476-11-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.1.2.2-Tetrachloroethane	79-34-5	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2.3-Trichloropropane	96-18-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Pentachloroethane	76-01-7	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2-Dibromo-3-chloropropane	96-12-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Dichlorodifluoromethane	75-71-8	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: Chloromethane	74-87-3	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: Bromomethane	74-83-9	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: Chloroethane	75-00-3	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: Trichlorofluoromethane	75-69-4	10	µg/L	<10	<10	0.00	No Limit
		EP074-WF: Methylene chloride	75-09-2	2	µg/L	<2	<2	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: 1.4-Dichlorobenzene	106-46-7	0.1	µg/L	<0.1	<0.1	0.00	No Limit
		EP074-WF: Chlorobenzene	108-90-7	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Bromobenzene	108-86-1	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 2-Chlorotoluene	95-49-8	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 4-Chlorotoluene	106-43-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.3-Dichlorobenzene	541-73-1	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2-Dichlorobenzene	95-50-1	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2.4-Trichlorobenzene	120-82-1	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: 1.2.3-Trichlorobenzene	87-61-6	1	µg/L	<1	<1	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Chloroform	67-66-3	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Bromodichloromethane	75-27-4	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Dibromochloromethane	124-48-1	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Bromoform	75-25-2	1	µg/L	<1	<1	0.00	No Limit
		EP074-WF: Total Trihalomethanes	----	1	µg/L	<1	<1	0.00	No Limit
EP074H: Naphthalene (QC Lot: 3111421)									
EM2010819-001	MW001_200625	EP074-WF: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
EP074L: Fuel Oxygenates (QC Lot: 3111422)									
EM2010819-001	MW001_200625	EP074: Methyl tert-butyl ether (MTBE)	1634-04-4	1	µg/L	<1	<1	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3111138)									
EM2011160-001	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	210	220	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.00	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	90	70	27.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3111423)									
EM2010819-001	MW001_200625	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3111138)									
EM2011160-001	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3111138) - continued									
EM2011160-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	µg/L	260	250	4.67	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3111423)									
EM2010819-001	MW001_200625	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 3111423)									
EM2010819-001	MW001_200625	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3116904)									
EM2010819-001	MW001_200625	EP202-SL: 4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: 2.4-DB	94-82-6	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Dicamba	1918-00-9	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Mecoprop	93-65-2	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: MCPA	94-74-6	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: 2.4-DP	120-36-5	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: 2.4-D	94-75-7	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Triclopyr	55335-06-3	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: 2.4.5-T	93-76-5	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: MCPB	94-81-5	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Picloram	1918-02-1	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Clopyralid	1702-17-6	10	µg/L	<10	<10	0.00	No Limit
		EP202-SL: Fluroxypyr	69377-81-7	10	µg/L	<10	<10	0.00	No Limit
EP204: Glyphosate and AMPA (QC Lot: 3118208)									
ES2022683-001	Anonymous	EP204: Glyphosate	1071-83-6	10	µg/L	<10	<10	0.00	No Limit
		EP204: AMPA	1066-51-9	10	µg/L	<10	<10	0.00	No Limit
EP233: Acrylamide (QC Lot: 3119605)									
EM2010819-001	MW001_200625	EP233: Acrylamide	79-06-1	0.2	µg/L	<0.2	<0.2	0.00	No Limit

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 3111745)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	100	93.7	107
				<10	293 mg/L	104	90.0	110
ED037P: Alkalinity by PC Titrator (QCLot: 3111731)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	104	88.0	112
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3111492)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	101	85.8	117
				<1	100 mg/L	96.8	85.8	117
ED045G: Chloride by Discrete Analyser (QCLot: 3111493)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	102	85.0	122
				<1	1000 mg/L	101	85.0	122
ED093F: Dissolved Major Cations (QCLot: 3111212)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	5 mg/L	110	88.2	117
ED093F: Magnesium	7439-95-4	1	mg/L	<1	5 mg/L	103	85.6	114
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	102	90.0	114
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	102	86.7	111
EG020F: Dissolved Metals by ICP-MS (QCLot: 3111209)								
EG020B-F: Silver	7440-22-4	0.001	mg/L	<0.001	0.02 mg/L	108	83.2	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 3111211)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	101	90.4	107
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	103	88.5	108
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	104	81.6	109
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	101	83.6	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.8	83.5	108
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.5	83.2	105
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	98.0	84.3	108
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.1	83.1	106
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	99.2	84.6	107
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	96.2	84.8	107
EG020A-F: Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.1 mg/L	99.5	88.3	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	99.3	84.3	108
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	92.3	82.3	110
EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	0.1 mg/L	104	86.7	111
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	105	86.3	111
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	105	85.4	113

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 3111424)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	107	90.8	115
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	104	89.2	113
EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	106	86.0	114
EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	108	87.2	113
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	103	86.4	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	101	86.9	110
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	99.6	87.7	112
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.8	86.9	109
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	100	88.3	110
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	102	88.7	112
EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.1 mg/L	106	88.3	114
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	101	87.9	111
EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	104	84.8	112
EG020A-T: Tin	7440-31-5	0.001	mg/L	<0.001	0.1 mg/L	105	91.2	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	112	86.7	114
EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	109	90.4	118
EG020T: Total Metals by ICP-MS (QCLot: 3111425)								
EG020B-T: Silver	7440-22-4	0.001	mg/L	<0.001	0.02 mg/L	106	83.3	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3111210)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	84.3	71.1	112
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3111135)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	88.3	72.6	115
EG050F: Dissolved Hexavalent Chromium (QCLot: 3113126)								
EG050G-F: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	0.5 mg/L	106	80.0	120
EG050T: Total Hexavalent Chromium (QCLot: 3113119)								
EG050G-T: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	0.5 mg/L	106	80.0	120
EK025SF: Free CN by Segmented Flow Analyser (QCLot: 3112179)								
EK025SF: Free Cyanide	----	0.004	mg/L	<0.004	0.2 mg/L	99.3	85.8	115
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3112180)								
EK026SF: Total Cyanide	57-12-5	0.004	mg/L	<0.004	0.2 mg/L	88.3	77.7	116
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3111991)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	102	88.0	116
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3111491)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	106	90.9	112
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3111992)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	110	90.0	117
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3111882)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3111882) - continued								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	5 mg/L	82.2	70.0	117
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3111881)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	2.21 mg/L	89.5	71.9	114
EP010: Formaldehyde (QCLot: 3113323)								
EP010: Formaldehyde	50-00-0	0.1	mg/L	<0.1	5 mg/L	98.8	85.1	107
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3115552)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	91.5	68.9	113
EP068A: Organochlorine Pesticides (OC) (QCLot: 3115553)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	90.0	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	86.8	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	106	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	102	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	102	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	83.6	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	99.6	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	92.7	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	90.6	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	95.5	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	91.0	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	93.7	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	91.0	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	88.0	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	95.0	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	98.1	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	83.8	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	93.0	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	90.4	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	82.4	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	84.7	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3115553)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	79.6	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	89.6	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	23.9	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	91.3	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	95.7	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	99.9	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	95.4	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	100	68.4	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3115553) - continued								
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	98.3	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	98.0	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	90.9	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	90.0	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	104	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	93.4	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	96.8	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	94.9	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	97.3	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	92.7	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	97.2	51.6	128
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3111421)								
EP074-WF: Benzene	71-43-2	1	µg/L	<1	20 µg/L	108	78.8	119
EP074-WF: Toluene	108-88-3	1	µg/L	<1	20 µg/L	94.6	80.6	119
EP074-WF: Ethylbenzene	100-41-4	1	µg/L	<1	20 µg/L	95.3	79.4	119
EP074-WF: meta- & para-Xylene	108-38-3 106-42-3	1	µg/L	<1	40 µg/L	94.2	78.1	120
EP074-WF: Styrene	100-42-5	1	µg/L	<1	20 µg/L	98.2	82.2	117
EP074-WF: ortho-Xylene	95-47-6	1	µg/L	<1	20 µg/L	96.6	82.9	119
EP074-WF: Isopropylbenzene	98-82-8	1	µg/L	<1	20 µg/L	89.8	77.6	118
EP074-WF: n-Propylbenzene	103-65-1	1	µg/L	<1	20 µg/L	90.5	70.9	117
EP074-WF: 1.3.5-Trimethylbenzene	108-67-8	1	µg/L	<1	20 µg/L	93.6	73.8	116
EP074-WF: sec-Butylbenzene	135-98-8	1	µg/L	<1	20 µg/L	91.6	71.7	118
EP074-WF: 1.2.4-Trimethylbenzene	95-63-6	1	µg/L	<1	20 µg/L	95.0	74.7	116
EP074-WF: tert-Butylbenzene	98-06-6	1	µg/L	<1	20 µg/L	93.9	75.2	118
EP074-WF: p-Isopropyltoluene	99-87-6	1	µg/L	<1	20 µg/L	89.1	70.7	118
EP074-WF: n-Butylbenzene	104-51-8	1	µg/L	<1	20 µg/L	80.9	62.7	119
EP074-WF: Total Xylenes	----	1	µg/L	<1	----	----	----	----
EP074B: Oxygenated Compounds (QCLot: 3111421)								
EP074-WF: Vinyl Acetate	108-05-4	10	µg/L	<10	200 µg/L	117	75.2	120
EP074-WF: 2-Butanone (MEK)	78-93-3	10	µg/L	<10	200 µg/L	108	70.2	125
EP074-WF: 4-Methyl-2-pentanone (MIBK)	108-10-1	10	µg/L	<10	200 µg/L	118	74.7	127
EP074-WF: 2-Hexanone (MBK)	591-78-6	10	µg/L	<10	200 µg/L	102	74.0	128
EP074C: Sulfonated Compounds (QCLot: 3111421)								
EP074-WF: Carbon disulfide	75-15-0	1	µg/L	<1	20 µg/L	90.0	62.8	123
EP074D: Fumigants (QCLot: 3111421)								
EP074-WF: 2.2-Dichloropropane	594-20-7	1	µg/L	<1	20 µg/L	88.8	71.5	121
EP074-WF: 1.2-Dichloropropane	78-87-5	1	µg/L	<1	20 µg/L	104	80.1	117

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP074D: Fumigants (QCLot: 3111421) - continued								
EP074-WF: cis-1.3-Dichloropropylene	10061-01-5	2	µg/L	<2	20 µg/L	106	77.8	114
EP074-WF: trans-1.3-Dichloropropylene	10061-02-6	2	µg/L	<2	20 µg/L	107	78.7	114
EP074-WF: 1.2-Dibromoethane (EDB)	106-93-4	1	µg/L	<1	20 µg/L	98.0	81.4	118
EP074E: Halogenated Aliphatic Compounds (QCLot: 3111421)								
EP074-WF: Dichlorodifluoromethane	75-71-8	10	µg/L	<10	200 µg/L	90.8	55.0	139
EP074-WF: Chloromethane	74-87-3	10	µg/L	<10	200 µg/L	98.8	62.0	134
EP074-WF: Vinyl chloride	75-01-4	0.2	µg/L	<0.2	200 µg/L	93.8	58.3	137
EP074-WF: Bromomethane	74-83-9	10	µg/L	<10	200 µg/L	96.3	50.7	127
EP074-WF: Chloroethane	75-00-3	10	µg/L	<10	200 µg/L	94.9	66.1	128
EP074-WF: Trichlorofluoromethane	75-69-4	10	µg/L	<10	200 µg/L	87.4	67.9	125
EP074-WF: 1.1-Dichloroethene	75-35-4	1	µg/L	<1	20 µg/L	84.2	69.2	123
EP074-WF: Iodomethane	74-88-4	1	µg/L	<1	20 µg/L	81.5	25.6	128
EP074-WF: Methylene chloride	75-09-2	2	µg/L	<2	20 µg/L	107	83.6	124
EP074-WF: trans-1.2-Dichloroethene	156-60-5	1	µg/L	<1	20 µg/L	91.8	71.8	118
EP074-WF: 1.1-Dichloroethane	75-34-3	1	µg/L	<1	20 µg/L	93.5	77.9	119
EP074-WF: cis-1.2-Dichloroethene	156-59-2	1	µg/L	<1	20 µg/L	99.7	80.3	117
EP074-WF: 1.1.1-Trichloroethane	71-55-6	1	µg/L	<1	20 µg/L	92.3	72.4	119
EP074-WF: 1.1-Dichloropropylene	563-58-6	1	µg/L	<1	20 µg/L	93.1	69.9	119
EP074-WF: Carbon Tetrachloride	56-23-5	1	µg/L	<1	20 µg/L	86.6	67.3	118
EP074-WF: 1.2-Dichloroethane	107-06-2	1	µg/L	<1	20 µg/L	108	82.4	115
EP074-WF: Trichloroethene	79-01-6	1	µg/L	<1	20 µg/L	103	73.7	118
EP074-WF: Dibromomethane	74-95-3	1	µg/L	<1	20 µg/L	104	80.7	115
EP074-WF: 1.1.2-Trichloroethane	79-00-5	1	µg/L	<1	20 µg/L	106	86.0	118
EP074-WF: 1.3-Dichloropropane	142-28-9	1	µg/L	<1	20 µg/L	109	85.0	119
EP074-WF: Tetrachloroethene	127-18-4	1	µg/L	<1	20 µg/L	87.4	72.9	120
EP074-WF: 1.1.1.2-Tetrachloroethane	630-20-6	1	µg/L	<1	20 µg/L	95.8	81.3	114
EP074-WF: trans-1.4-Dichloro-2-butene	110-57-6	1	µg/L	<1	20 µg/L	96.2	76.0	120
EP074-WF: cis-1.4-Dichloro-2-butene	1476-11-5	1	µg/L	<1	20 µg/L	89.6	71.5	115
EP074-WF: 1.1.2.2-Tetrachloroethane	79-34-5	1	µg/L	<1	20 µg/L	110	84.0	122
EP074-WF: 1.2.3-Trichloropropane	96-18-4	1	µg/L	<1	20 µg/L	101	83.6	120
EP074-WF: Pentachloroethane	76-01-7	1	µg/L	<1	20 µg/L	97.5	74.6	113
EP074-WF: 1.2-Dibromo-3-chloropropane	96-12-8	1	µg/L	<1	20 µg/L	99.0	75.3	115
EP074-WF: Hexachlorobutadiene	87-68-3	0.5	µg/L	<0.5	20 µg/L	91.4	61.9	132
EP074-WF: Bromochloromethane	74-97-5	1	µg/L	<1	20 µg/L	104	83.3	114
EP074F: Halogenated Aromatic Compounds (QCLot: 3111421)								
EP074-WF: Chlorobenzene	108-90-7	1	µg/L	<1	20 µg/L	100	83.8	116
EP074-WF: Bromobenzene	108-86-1	1	µg/L	<1	20 µg/L	102	73.9	121
EP074-WF: 2-Chlorotoluene	95-49-8	1	µg/L	<1	20 µg/L	96.3	76.5	116
EP074-WF: 4-Chlorotoluene	106-43-4	1	µg/L	<1	20 µg/L	95.0	74.0	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP074F: Halogenated Aromatic Compounds (QCLot: 3111421) - continued								
EP074-WF: 1.3-Dichlorobenzene	541-73-1	1	µg/L	<1	20 µg/L	103	75.9	117
EP074-WF: 1.4-Dichlorobenzene	106-46-7	0.1	µg/L	<0.1	20 µg/L	103	76.5	119
EP074-WF: 1.2-Dichlorobenzene	95-50-1	1	µg/L	<1	20 µg/L	99.7	83.0	114
EP074-WF: 1.2.4-Trichlorobenzene	120-82-1	1	µg/L	<1	20 µg/L	87.1	66.2	125
EP074-WF: 1.2.3-Trichlorobenzene	87-61-6	1	µg/L	<1	20 µg/L	87.0	76.8	121
EP074G: Trihalomethanes (QCLot: 3111421)								
EP074-WF: Chloroform	67-66-3	1	µg/L	<1	20 µg/L	100	81.3	117
EP074-WF: Bromodichloromethane	75-27-4	1	µg/L	<1	20 µg/L	107	79.6	114
EP074-WF: Dibromochloromethane	124-48-1	1	µg/L	<1	20 µg/L	94.3	79.9	113
EP074-WF: Bromoform	75-25-2	1	µg/L	<1	20 µg/L	89.2	76.4	112
EP074-WF: Total Trihalomethanes	----	1	µg/L	<1	----	----	----	----
EP074H: Naphthalene (QCLot: 3111421)								
EP074-WF: Naphthalene	91-20-3	5	µg/L	<5	20 µg/L	102	81.8	117
EP074L: Fuel Oxygenates (QCLot: 3111422)								
EP074: Methyl tert-butyl ether (MTBE)	1634-04-4	1	µg/L	<1	20 µg/L	111	78.6	124
EP075(SIM)A: Phenolic Compounds (QCLot: 3111139)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	38.5	17.1	50.5
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	90.6	40.6	106
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	81.8	37.8	97.5
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	72.0	34.8	89.3
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	96.8	38.8	124
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	83.6	42.3	111
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	95.2	43.4	114
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	91.2	44.3	116
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	88.5	45.2	117
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	88.6	41.3	120
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	89.9	43.1	122
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	64.9	48.1	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3111139)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	88.6	41.1	116
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	92.8	47.2	121
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	92.8	47.3	118
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	94.0	49.4	121
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	96.3	52.5	124
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	97.0	52.3	125
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	97.3	52.4	127
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	98.6	51.3	130
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	96.2	50.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3111139) - continued								
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	101	49.6	131
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	103	51.5	132
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	91.7	54.0	131
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	99.8	52.3	133
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	109	50.4	127
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	109	50.0	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	108	50.8	128
EP075A: Phenolic Compounds (QCLot: 3115550)								
EP075: Phenol	108-95-2	2	µg/L	<2	10 µg/L	35.0	25.5	64.1
EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	10 µg/L	75.5	52.0	88.0
EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	10 µg/L	71.9	50.0	94.0
EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2	10 µg/L	68.2	45.0	96.2
EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	10 µg/L	83.8	48.0	98.0
EP075: 2.4-Dimethylphenol	105-67-9	2	µg/L	<2	10 µg/L	82.3	50.0	94.0
EP075: 2.4-Dichlorophenol	120-83-2	2	µg/L	<2	10 µg/L	85.6	61.9	109
EP075: 2.6-Dichlorophenol	87-65-0	2	µg/L	<2	10 µg/L	82.4	61.5	108
EP075: 4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	10 µg/L	86.4	61.4	107
EP075: 2.4.6-Trichlorophenol	88-06-2	2	µg/L	<2	10 µg/L	88.2	57.6	112
EP075: 2.4.5-Trichlorophenol	95-95-4	2	µg/L	<2	10 µg/L	94.2	58.0	110
EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	20 µg/L	80.0	12.8	95.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3115550)								
EP075: Naphthalene	91-20-3	2	µg/L	<2	10 µg/L	78.9	51.0	95.0
EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	10 µg/L	82.8	59.0	108
EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	10 µg/L	76.7	60.6	106
EP075: Acenaphthylene	208-96-8	2	µg/L	<2	10 µg/L	88.7	64.0	108
EP075: Acenaphthene	83-32-9	2	µg/L	<2	10 µg/L	83.5	65.0	108
EP075: Fluorene	86-73-7	2	µg/L	<2	10 µg/L	86.7	65.2	107
EP075: Phenanthrene	85-01-8	2	µg/L	<2	10 µg/L	90.3	66.7	108
EP075: Anthracene	120-12-7	2	µg/L	<2	10 µg/L	91.4	65.8	108
EP075: Fluoranthene	206-44-0	2	µg/L	<2	10 µg/L	94.1	64.9	109
EP075: Pyrene	129-00-0	2	µg/L	<2	10 µg/L	94.1	60.1	111
EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	10 µg/L	106	59.7	110
EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	10 µg/L	95.5	62.2	112
EP075: Chrysene	218-01-9	2	µg/L	<2	10 µg/L	95.6	59.3	114
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	20 µg/L	96.4	60.1	111
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	10 µg/L	97.1	50.0	108
EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	10 µg/L	99.3	59.2	112

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3115550) - continued								
EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	10 µg/L	93.9	60.1	110
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	2	µg/L	<2	10 µg/L	97.8	59.6	110
EP075: Dibenz(a.h)anthracene	53-70-3	2	µg/L	<2	10 µg/L	98.6	57.2	109
EP075: Benzo(g.h.i)perylene	191-24-2	2	µg/L	<2	10 µg/L	97.7	60.6	110
EP075: Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	----	----	----	----
EP075C: Phthalate Esters (QCLot: 3115550)								
EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	10 µg/L	94.2	64.3	112
EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	10 µg/L	92.9	67.3	111
EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	10 µg/L	95.1	68.4	122
EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	10 µg/L	95.1	61.2	114
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	µg/L	----	10 µg/L	104	60.0	132
EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	10 µg/L	95.0	62.1	115
EP075: Di (2-ethylhexyl) adipate	103-23-1	2	µg/L	<2	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3111138)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	3330 µg/L	96.8	44.8	125
EP071: C15 - C28 Fraction	----	100	µg/L	<100	16500 µg/L	91.4	51.3	135
EP071: C29 - C36 Fraction	----	50	µg/L	<50	7800 µg/L	93.4	49.4	134
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3111423)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	102	65.5	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3115551)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	78.8	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	103	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	107	56.0	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3111138)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	5690 µg/L	85.8	47.3	129
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	20700 µg/L	93.9	50.4	133
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	1510 µg/L	94.1	45.2	136
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3111423)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	101	64.3	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3115551)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	80.5	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	109	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	97.9	61.5	121
EP080: BTEXN (QCLot: 3111423)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	102	69.8	124
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	105	73.6	126
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	106	72.0	126

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP080: BTEXN (QCLot: 3111423) - continued								
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	106	71.5	132
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	108	76.5	132
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	119	70.5	127
EP094A: Synthetic Pyrethroids (QCLot: 3118334)								
EP094: Bioresmethrin	28434-01-07	0.5	µg/L	<0.5	0.5 µg/L	76.7	39.0	133
EP094: Bifenthrin	82657-04-3	0.5	µg/L	<0.5	0.5 µg/L	83.5	47.0	122
EP094: Phenothrin	26002-80-2	0.5	µg/L	<0.5	0.5 µg/L	80.6	51.0	119
EP094: Lambda-cyhalothrin	68085-85-8	0.5	µg/L	<0.5	0.5 µg/L	71.9	47.0	127
EP094: Permethrin	52645-53-1	0.5	µg/L	<0.5	0.5 µg/L	81.1	56.0	122
EP094: Cyfluthrin	68359-37-5	0.5	µg/L	<0.5	0.5 µg/L	71.7	41.0	119
EP094: Cypermethrin	52315-07-8	0.5	µg/L	<0.5	0.5 µg/L	74.1	36.0	138
EP094: Fenvalerate & Esfenvalerate	51630-58-1/ 66230-04-	0.5	µg/L	<0.5	0.5 µg/L	75.8	47.0	129
EP094: Deltamethrin & Tralomethrin	62229-77-0/ 66841-25-	0.5	µg/L	<0.5	0.5 µg/L	69.2	42.0	126
EP094: Allethrin	584-79-2	0.5	µg/L	<0.5	0.5 µg/L	77.2	46.0	127
EP094: Transfluthrin	118712-89-3	0.5	µg/L	<0.5	0.5 µg/L	70.7	58.0	125
EP094: Tau-fluvalinate	102851-06-9	0.5	µg/L	<0.5	0.5 µg/L	75.5	27.0	140
EP094: Tetramethrin	7696-12-0	0.5	µg/L	<0.5	0.5 µg/L	79.5	42.0	117
EP094B: Synergist (QCLot: 3118334)								
EP094: Piperonyl Butoxide	63993-73-7	0.5	µg/L	<0.5	0.5 µg/L	83.0	47.0	128
EP201: Carbamate Pesticides by LCMS (QCLot: 3116914)								
EP201: Oxamyl	23135-22-0	0.2	µg/L	<0.2	1 µg/L	104	78.3	144
EP201: Methomyl	16752-77-5	0.2	µg/L	<0.2	1 µg/L	99.0	59.9	137
EP201: 3-Hydroxy Carbofuran	16655-82-6	0.2	µg/L	<0.2	1 µg/L	96.5	61.1	143
EP201: Aldicarb	116-06-3	0.2	µg/L	<0.2	1 µg/L	104	52.0	128
EP201: Bendiocarb	22781-23-3	0.2	µg/L	<0.2	1 µg/L	94.6	70.2	132
EP201: Thiodicarb	59669-26-0	0.2	µg/L	<0.2	1 µg/L	101	52.0	144
EP201: Carbofuran	1563-66-2	0.2	µg/L	<0.2	1 µg/L	101	63.0	145
EP201: Carbaryl	63-25-2	0.2	µg/L	<0.2	1 µg/L	100	57.0	151
EP201: Methiocarb	2032-65-7	0.2	µg/L	<0.2	1 µg/L	102	58.0	148
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3116904)								
EP202-SL: 4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	100 µg/L	103	82.0	136
EP202-SL: 2.4-DB	94-82-6	10	µg/L	<10	100 µg/L	112	65.0	147
EP202-SL: Dicamba	1918-00-9	10	µg/L	<10	100 µg/L	96.1	83.0	137
EP202-SL: Mecoprop	93-65-2	10	µg/L	<10	100 µg/L	110	75.0	143
EP202-SL: MCPA	94-74-6	10	µg/L	<10	100 µg/L	103	76.0	140

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3116904) - continued								
EP202-SL: 2.4-DP	120-36-5	10	µg/L	<10	100 µg/L	99.0	76.0	144
EP202-SL: 2.4-D	94-75-7	10	µg/L	<10	100 µg/L	96.7	77.0	139
EP202-SL: Triclopyr	55335-06-3	10	µg/L	<10	100 µg/L	98.8	77.0	141
EP202-SL: Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	100 µg/L	102	75.0	143
EP202-SL: 2.4.5-T	93-76-5	10	µg/L	<10	100 µg/L	93.8	78.0	140
EP202-SL: MCPB	94-81-5	10	µg/L	<10	100 µg/L	116	69.2	139
EP202-SL: Picloram	1918-02-1	10	µg/L	<10	100 µg/L	91.4	70.0	144
EP202-SL: Clopyralid	1702-17-6	10	µg/L	<10	100 µg/L	97.4	70.0	145
EP202-SL: Fluroxypyr	69377-81-7	10	µg/L	<10	100 µg/L	108	77.0	145
EP204: Glyphosate and AMPA (QCLot: 3118208)								
EP204: Glyphosate	1071-83-6	10	µg/L	<10	50 µg/L	93.1	70.0	134
EP204: AMPA	1066-51-9	10	µg/L	<10	50 µg/L	93.4	68.0	134
EP233: Acrylamide (QCLot: 3119605)								
EP233: Acrylamide	79-06-1	0.2	µg/L	<0.2	2 µg/L	88.4	70.0	128

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 3111492)							
EM2011118-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	80.4	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 3111493)							
EM2011118-001	Anonymous	ED045G: Chloride	16887-00-6	400 mg/L	104	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 3111211)							
EM2010782-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	88.5	85.0	131
		EG020A-F: Beryllium	7440-41-7	0.2 mg/L	95.8	73.0	141
		EG020A-F: Barium	7440-39-3	0.2 mg/L	96.3	75.0	127
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	94.4	81.0	133
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	90.1	71.0	135
		EG020A-F: Cobalt	7440-48-4	0.2 mg/L	105	78.0	132
		EG020A-F: Copper	7440-50-8	0.2 mg/L	93.0	76.0	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	91.1	75.0	133
		EG020A-F: Manganese	7439-96-5	0.2 mg/L	104	64.0	134
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	88.4	73.0	131
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	93.1	75.0	131

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 3111424)							
EM2010805-017	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	105	82.0	118
		EG020A-T: Beryllium	7440-41-7	1 mg/L	111	79.0	121
		EG020A-T: Barium	7440-39-3	1 mg/L	108	80.0	114
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	108	75.0	129
		EG020A-T: Chromium	7440-47-3	1 mg/L	103	80.0	118
		EG020A-T: Cobalt	7440-48-4	1 mg/L	101	82.0	120
		EG020A-T: Copper	7440-50-8	1 mg/L	101	81.0	115
		EG020A-T: Lead	7439-92-1	1 mg/L	102	83.0	121
		EG020A-T: Manganese	7439-96-5	1 mg/L	112	73.0	123
		EG020A-T: Nickel	7440-02-0	1 mg/L	104	80.0	118
		EG020A-T: Zinc	7440-66-6	1 mg/L	103	74.0	116
EG035F: Dissolved Mercury by FIMS (QCLot: 3111210)							
EM2010782-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	76.8	70.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3111135)							
EM2011081-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	73.0	70.0	130
EG050F: Dissolved Hexavalent Chromium (QCLot: 3113126)							
EM2011152-002	Anonymous	EG050G-F: Hexavalent Chromium	18540-29-9	0.5 mg/L	95.2	80.0	120
EG050T: Total Hexavalent Chromium (QCLot: 3113119)							
EM2010908-001	Anonymous	EG050G-T: Hexavalent Chromium	18540-29-9	0.5 mg/L	105	80.0	120
EK025SF: Free CN by Segmented Flow Analyser (QCLot: 3112179)							
EM2011189-001	Anonymous	EK025SF: Free Cyanide	----	0.2 mg/L	98.0	70.0	130
EK026SF: Total CN by Segmented Flow Analyser (QCLot: 3112180)							
EM2011188-001	Anonymous	EK026SF: Total Cyanide	57-12-5	0.2 mg/L	86.0	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 3111991)							
EM2010945-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	111	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 3111491)							
EM2011137-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	96.4	80.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 3111992)							
EM2010945-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	97.3	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 3111882)							
EM2010838-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	80.8	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 3111881)							
EM2010838-001	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	92.1	70.0	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3111421)							
EM2010819-001	MW001_200625	EP074-WF: Benzene	71-43-2	20 µg/L	78.5	76.0	128

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3111421) - continued							
EM2010819-001	MW001_200625	EP074-WF: Toluene	108-88-3	20 µg/L	74.5	72.0	132
EP074E: Halogenated Aliphatic Compounds (QCLot: 3111421)							
EM2010819-001	MW001_200625	EP074-WF: 1.1-Dichloroethene	75-35-4	20 µg/L	75.0	63.0	129
		EP074-WF: Trichloroethene	79-01-6	20 µg/L	75.1	64.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 3111421)							
EM2010819-001	MW001_200625	EP074-WF: Chlorobenzene	108-90-7	20 µg/L	83.5	81.0	119
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3111138)							
EM2011160-001	Anonymous	EP071: C10 - C14 Fraction	----	3330 µg/L	86.5	50.0	130
		EP071: C15 - C28 Fraction	----	16500 µg/L	78.1	54.0	136
		EP071: C29 - C36 Fraction	----	7800 µg/L	79.1	50.0	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3111423)							
EM2010819-001	MW001_200625	EP080: C6 - C9 Fraction	----	280 µg/L	50.2	43.0	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3111138)							
EM2011160-001	Anonymous	EP071: >C10 - C16 Fraction	----	5690 µg/L	75.2	50.0	128
		EP071: >C16 - C34 Fraction	----	20700 µg/L	80.0	50.0	150
		EP071: >C34 - C40 Fraction	----	1510 µg/L	77.8	51.0	159
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3111423)							
EM2010819-001	MW001_200625	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	48.4	44.0	122
EP080: BTEXN (QCLot: 3111423)							
EM2010819-001	MW001_200625	EP080: Benzene	71-43-2	20 µg/L	77.6	68.0	130
		EP080: Toluene	108-88-3	20 µg/L	76.1	72.0	132
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3116904)							
EM2010819-001	MW001_200625	EP202-SL: Mecoprop	93-65-2	100 µg/L	118	75.0	143
		EP202-SL: MCPA	94-74-6	100 µg/L	115	76.0	140
		EP202-SL: 2.4-D	94-75-7	100 µg/L	111	77.0	139
		EP202-SL: Triclopyr	55335-06-3	100 µg/L	117	77.0	141
		EP202-SL: 2.4.5-T	93-76-5	100 µg/L	117	78.0	140
		EP202-SL: Picloram	1918-02-1	100 µg/L	# 47.2	70.0	144
		EP202-SL: Clopyralid	1702-17-6	100 µg/L	# 39.8	70.0	145
EP204: Glyphosate and AMPA (QCLot: 3118208)							
ES2022683-001	Anonymous	EP204: Glyphosate	1071-83-6	50 µg/L	89.2	57.0	125
		EP204: AMPA	1066-51-9	50 µg/L	88.0	60.0	129
EP233: Acrylamide (QCLot: 3119605)							
EM2010819-001	MW001_200625	EP233: Acrylamide	79-06-1	2 µg/L	# 18.3	70.0	128

(13)

ALS Environmental

CHAIN OF CUSTODY

ALS Laboratory: please tick →

[illegible]

CLIENT: Jacobs	**TURNAROUND REQUIREMENT** ☒ Standard TAT (List due date):
OFFICE: Level 11 452 Flinders Street, Melbourne 3000	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: IS305100	**ALS QUOTE NO.:** ME/473/20 (Eurofins - 200611JAC)
ORDER NUMBER: 1578 (Eurofins - 1574)	**COC SEQUENCE NUMBER (Circle)** COC: 1 OF: 1
PROJECT MANAGER: Kate Munro	**CONTACT PH:**
SAMPLER: EM / AM	**SAMPLER MOBILE:** 0427 931 093
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**
Email Reports to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com	
Email ESDAT Files to: jacob.taylor@jacobs.com; ash.metagesha@jacobs.com; jacobs.labresults@esdat.net	
Email Invoice to: kate.munro@jacobs.com; jacob.taylor@jacobs.com	

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Erin McIntosh	Sam	(ALS)	Joanne Con Ice 0.2
DATE/TIME: 26/6/20	DATE/TIME: 11:00 26/6/20	DATE/TIME: 29/6	DATE/TIME: 29/6/20 6:45pm

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS SOLID (S) WATER (W)		MATRIX	CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).																						Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	Solvents suite (CM051-S)	Total Nitrogen, NO2, NO3, NH3 + Total P (NT-8)	Metals (Al, As, Ba, Be, B, Cd, Cr(VI), Co, Cu, Pb, Mn, Hg, Ni, Se and Zn) (EG020F/EG050/ EG035F)	Additional metals (Ag, Mo, Sn)	Major Ions / TDS (NT01&02 / EA015H)	TRH / BTEXN / PAH / Phenols (W-24)	Low level VOCs (EP074-WF)	pH & chloride / Sulfate as SO4 (Corr Sch 3 / EA015H)	Ultratrace OC and OP (extended), PCB Pesticides (UTO-10W)	Acrylamide / SVOC - Phthalate Esters EP010 / EP118-1 / EP233 / EP075C)	Glyphosate / Synthetic Pyrethroids (EP201 /EP202SL /EP204 /EP094)	Methyl tert-Butyl Ether - MTBE (EP074L)	Total cyanide / Free CN (EK026SF / EK025SF)	E. coli (MM514)	Triazine Herbicides (EP234H)	Metals (8) / TRH / BTEXN / PAHs (S-26)	TRH(C6-9)/BTEXN (S-18)					HOLD	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MW001_200625	25/06/2020 13:30	W	ICE	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
2	RB_200625	25/06/2020	W	ICE	5			X	X		X	X																
→	QC01_200625	25/06/2020 13:30	W	ICE	10															X	X							Please forward to Eurofins
3	TB01_200625	15/06/2020	W	ICE	3																						X	
4	FB_200625	25/06/2020 14:00	W	ICE	3																	X						
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				TOTAL																								

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Mona Deere

728543

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

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

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Site # 1254 & 14271

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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IANZ # 1327

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

Company Name: Jacobs Group (Australia) P/L VIC
Address: PO Box 312 Flinders Lane
Melbourne
VIC 8009

Project Name: IS305100

Order No.: 1574
Report #: 728543
Phone: 03 8668 3000
Fax: 03 8668 3001

Received: Jun 29, 2020 6:45 PM
Due: Jul 7, 2020
Priority: 5 Day
Contact Name: Kate Munro

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Polycyclic Aromatic Hydrocarbons	Triazines	Metals M8 filtered	BTEX and Naphthalene	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	QC01_200625	Jun 25, 2020		Water	M20-Jn50076	X	X	X	X	X
Test Counts						1	1	1	1	1

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6 Monterey Road
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NATA # 1261 Site # 20794

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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:	**Jacobs Group (Australia) P/L VIC**
Contact name:	Kate Munro
Project name:	IS305100
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jun 29, 2020 6:45 PM
Eurofins reference:	**728543**

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:

Harry Bacalis on Phone : or by e.mail: HarryBacalis@eurofins.com

Results will be delivered electronically via e.mail to Kate Munro - kate.munro@jacobs.com.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

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.

Jacobs Group (Australia) P/L VIC
PO Box 312 Flinders Lane
Melbourne
VIC 8009

Attention: **Kate Munro**

Report **728543-W**
Project name IS305100
Received Date Jun 29, 2020

Client Sample ID			**QC01_200625**
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Jn50076**
Date Sampled			**Jun 25, 2020**
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-C36 (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	%	94
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
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001

Client Sample ID			QC01_200625
Sample Matrix			Water
Eurofins Sample No.			M20-Jn50076
Date Sampled			Jun 25, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	65
p-Terphenyl-d14 (surr.)	1	%	71
Triazines			
Ametryn	0.002	mg/L	< 0.002
Atraton	0.002	mg/L	< 0.002
Atrazine	0.002	mg/L	< 0.002
Prometon	0.002	mg/L	< 0.002
Prometryn	0.002	mg/L	< 0.002
Propazine	0.002	mg/L	< 0.002
Simazine	0.002	mg/L	< 0.002
Simetryn	0.002	mg/L	< 0.002
Terbuthylazine	0.002	mg/L	< 0.002
Terbutryne	0.002	mg/L	< 0.002
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	0.004
Copper (filtered)	0.001	mg/L	0.003
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	0.015
Zinc (filtered)	0.005	mg/L	0.028

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jun 30, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 30, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jun 30, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX and Naphthalene			
BTEX	Melbourne	Jun 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jun 30, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Triazines	Melbourne	Jun 30, 2020	7 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
Metals M8 filtered	Melbourne	Jun 30, 2020	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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Company Name: Jacobs Group (Australia) P/L VIC
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Project Name: IS305100

Order No.: 1574
Report #: 728543
Phone: 03 8668 3000
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Received: Jun 29, 2020 6:45 PM
Due: Jul 7, 2020
Priority: 5 Day
Contact Name: Kate Munro

Eurofins Analytical Services Manager : Harry Bacalis

Sample Detail						Polycyclic Aromatic Hydrocarbons	Triazines	Metals M8 filtered	BTEX and Naphthalene	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	QC01_200625	Jun 25, 2020		Water	M20-Jn50076	X	X	X	X	X
Test Counts						1	1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****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							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Triazines							
Ametryn	mg/L	< 0.002			0.002	Pass	
Atraton	mg/L	< 0.002			0.002	Pass	
Atrazine	mg/L	< 0.002			0.002	Pass	
Prometon	mg/L	< 0.002			0.002	Pass	
Prometryn	mg/L	< 0.002			0.002	Pass	
Propazine	mg/L	< 0.002			0.002	Pass	
Simazine	mg/L	< 0.002			0.002	Pass	
Simetryn	mg/L	< 0.002			0.002	Pass	
Terbuthylazine	mg/L	< 0.002			0.002	Pass	
Terbutryne	mg/L	< 0.002			0.002	Pass	
Method Blank							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals									
Arsenic (filtered)			mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)			mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)			mg/L	< 0.001			0.001	Pass	
Copper (filtered)			mg/L	< 0.001			0.001	Pass	
Lead (filtered)			mg/L	< 0.001			0.001	Pass	
Mercury (filtered)			mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)			mg/L	< 0.001			0.001	Pass	
Zinc (filtered)			mg/L	< 0.005			0.005	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
TRH C6-C9			%	120			70-130	Pass	
TRH C10-C14			%	71			70-130	Pass	
LCS - % Recovery									
BTEX									
Benzene			%	104			70-130	Pass	
Toluene			%	99			70-130	Pass	
Ethylbenzene			%	97			70-130	Pass	
m&p-Xylenes			%	96			70-130	Pass	
Xylenes - Total*			%	97			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
Naphthalene			%	117			70-130	Pass	
TRH C6-C10			%	105			70-130	Pass	
TRH >C10-C16			%	70			70-130	Pass	
LCS - % Recovery									
Polycyclic Aromatic Hydrocarbons									
Acenaphthene			%	91			70-130	Pass	
Acenaphthylene			%	92			70-130	Pass	
Anthracene			%	91			70-130	Pass	
Benz(a)anthracene			%	96			70-130	Pass	
Benzo(a)pyrene			%	100			70-130	Pass	
Benzo(b&j)fluoranthene			%	95			70-130	Pass	
Benzo(g.h.i)perylene			%	105			70-130	Pass	
Benzo(k)fluoranthene			%	116			70-130	Pass	
Chrysene			%	109			70-130	Pass	
Dibenz(a.h)anthracene			%	98			70-130	Pass	
Fluoranthene			%	93			70-130	Pass	
Fluorene			%	92			70-130	Pass	
Indeno(1.2.3-cd)pyrene			%	98			70-130	Pass	
Naphthalene			%	85			70-130	Pass	
Phenanthrene			%	91			70-130	Pass	
Pyrene			%	93			70-130	Pass	
LCS - % Recovery									
Triazines									
Prometryn			%	82			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Jl03871	NCP	%	95			70-130	Pass	
TRH C10-C14	M20-Jl02807	NCP	%	112			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Jl03871	NCP	%	88			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	M20-Jl03871	NCP	%	91			70-130	Pass	
Ethylbenzene	M20-Jl03871	NCP	%	104			70-130	Pass	
m&p-Xylenes	M20-Jl03871	NCP	%	108			70-130	Pass	
o-Xylene	M20-Jl03871	NCP	%	107			70-130	Pass	
Xylenes - Total*	M20-Jl03871	NCP	%	108			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Jl03871	NCP	%	103			70-130	Pass	
TRH C6-C10	M20-Jl03871	NCP	%	88			70-130	Pass	
TRH >C10-C16	M20-Jl02807	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M20-Jn49374	NCP	%	101			70-130	Pass	
Cadmium (filtered)	M20-Jn49374	NCP	%	99			70-130	Pass	
Chromium (filtered)	M20-Jn49374	NCP	%	99			70-130	Pass	
Copper (filtered)	M20-Jn49374	NCP	%	99			70-130	Pass	
Lead (filtered)	M20-Jn49374	NCP	%	99			70-130	Pass	
Mercury (filtered)	M20-Jn49374	NCP	%	87			70-130	Pass	
Nickel (filtered)	M20-Jn49374	NCP	%	97			70-130	Pass	
Zinc (filtered)	M20-Jn49374	NCP	%	99			70-130	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	M20-Jl01688	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M20-Jl02806	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Jl02806	NCP	mg/L	0.7	0.8	9.0	30%	Pass	
TRH C29-C36	M20-Jl02806	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Jl01688	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Jl01688	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Jl01688	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Jl01688	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Jl01688	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-Jl01688	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Jl01688	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Jl01688	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M20-Jl02806	NCP	mg/L	0.41	0.46	12	30%	Pass	
TRH >C34-C40	M20-Jl02806	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Fluorene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M20-Jn50344	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atraton	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atrazine	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometon	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometryn	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Propazine	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Simazine	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Simetryn	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbuthylazine	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbutryne	M20-Jn50344	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M20-Jn48602	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	M20-Jn48602	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M20-Jn48602	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M20-Jn48602	NCP	mg/L	0.011	0.010	3.0	30%	Pass	
Lead (filtered)	M20-Jn48602	NCP	mg/L	0.001	< 0.001	19	30%	Pass	
Mercury (filtered)	M20-Jn48602	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M20-Jn48602	NCP	mg/L	0.025	0.024	4.0	30%	Pass	
Zinc (filtered)	M20-Jn48602	NCP	mg/L	0.024	0.023	2.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Harry Bacalis	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.

Rebatch

Client / Client code: SINKNI
Project: IS305100
Project Manager: Kate Munro, Jacob Taylor, Arthur Teo, Ash Metagesha
Date /time sample rec: Wednesday, 17 June 2020
Date/time Instructions rec: 3/07/2020 10:31
Due date: Monday, 6 July 2020
Due date surcharge: 1 day TAT

CS Contact:
Additional Information:
PO 1578

MS 3084

URGENT

New Lab ID	Sample information							Analysis										
								Standard					Leach					
	Client ID	Sampling Date / Time	Previous Work Order Reference	Previous ALS ID	Tray Number(s)	Container	Number of Containers						ASLP - Ni					Shortest Holding time expiry
1	STP09_0.4	17/06/2020 0:00	EM2010590	41	MS 2826-28	Jar	1						X					
2	STP12_0.7	17/06/2020 0:00	EM2010590	47	MS 2826-28	Jar	1						X					
3	MW001_1.5	18/06/2020 0:00	EM2010590	2	MS 2826-28	Jar	1						X					
4	TP05_0.8	16/06/2020 0:00	EM2010~~590~~ 198	21	MS 2728-29	Jar	1						X					
						TOTAL	4											

Environmental Division
Melbourne
Work Order Reference
EM2011438

Telephone : + 61-3-8549 9600

Niki Papastergiou

From: Taylor, Jacob <Jacob.Taylor@jacobs.com>
Sent: Friday, 3 July 2020 10:31 AM
To: Peter Ravlic
Cc: Teo, Arthur; Metagesha, Ash
Subject: [EXTERNAL] - ES305100 Request for Additional Analysis

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

HI Peter,

Can we please schedule the following samples for ASLP testing (with acetate buffer solution) for nickel;

- From EM2010590
  - STP09_0.4
  - STP12_0.7
  - MW001_1.5
- From EM2010198
  - TP05_0.8

Can this be done under the 24hr turn around time, as we require the result by Monday 6th.

Please let me know if this will be any issue.

Thanks,

Jacob Taylor | Jacobs | Environmental Scientist | Contaminated Land Assessment & Remediation ANZ
O:+61 3 8668 6317 | M:+61 427 931 093 | jacob.taylor@jacobs.com
Level 11, 452 Flinders Street | Melbourne, Victoria 3000 | Australia

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2011438**	Page	: 1 of 4
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020 09:45
Order number	: 1578	Date Analysis Commenced	: 03-Jul-2020
C-O-C number	: ----	Issue Date	: 06-Jul-2020 13:41
Sampler	: ----		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

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

Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC

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

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

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

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

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

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

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

- This is a rebatch of EM2010590 and EM2010198.

Sub-Matrix: ASLP LEACHATE (Matrix: WATER)				STP09_0.4	STP12_0.7	MW001_1.5	TP05_0.8	----
				17-Jun-2020 00:00	17-Jun-2020 00:00	18-Jun-2020 00:00	16-Jun-2020 00:00	----
				EM2011438-001	EM2011438-002	EM2011438-003	EM2011438-004	--------
				Result	Result	Result	Result	----
EG005(ED093)C: Leachable Metals by ICPAES								
Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	----

Sub-Matrix: SOIL (Matrix: SOIL)				STP09_0.4	STP12_0.7	MW001_1.5	TP05_0.8	----
				17-Jun-2020 00:00	17-Jun-2020 00:00	18-Jun-2020 00:00	16-Jun-2020 00:00	----
				EM2011438-001	EM2011438-002	EM2011438-003	EM2011438-004	--------
				Result	Result	Result	Result	----
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**9.9**	**10.0**	**9.8**	**7.5**	**----**
After HCl pH	----	0.1	pH Unit	**1.9**	**1.9**	**6.1**	**1.9**	**----**
Extraction Fluid pH	----	0.1	pH Unit	**5.0**	**5.0**	**2.9**	**5.0**	**----**
Final pH	----	0.1	pH Unit	**6.5**	**6.6**	**5.7**	**5.1**	**----**

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2011438**	Page	: 1 of 4
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020
Site	: ----	Issue Date	: 06-Jul-2020
Sampler	: ----	No. of samples received	: 4
Order number	: 1578	No. of samples analysed	: 4

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN60: ASLP Leaching Procedure							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a)							
TP05_0.8	**16-Jun-2020**	**03-Jul-2020**	13-Dec-2020	✓	**----**	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a)							
STP09_0.4, STP12_0.7	**17-Jun-2020**	**03-Jul-2020**	14-Dec-2020	✓	**----**	----	----
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN60a)							
MW001_1.5	**18-Jun-2020**	**03-Jul-2020**	15-Dec-2020	✓	**----**	----	----

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)C: Leachable Metals by ICPAES							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C)							
STP09_0.4, STP12_0.7, MW001_1.5, TP05_0.8	**03-Jul-2020**	**06-Jul-2020**	30-Dec-2020	✓	**06-Jul-2020**	30-Dec-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Leachable Metals by ICPAES	EG005C	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Leachable Metals by ICPAES	EG005C	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Leachable Metals by ICPAES	EG005C	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Leachable Metals by ICPAES	EG005C	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	*Method*	*Matrix*	*Method Descriptions*
Leachable Metals by ICPAES	EG005C	SOIL	In house: referenced to APHA 3120; USEPA SW 846 - 6010: The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (2013) Schedule B(3)

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)
ASLP for Non & Semivolatile Analytes	EN60a	SOIL	In house QWI-EN/60 referenced to AS4439.3 Preparation of Leachates

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2011438**	Page	: 1 of 3
Client	: **JACOBS GROUP (AUSTRALIA) PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: KATE MUNRO	Contact	: Peter Ravlic
Address	: PO BOX 312 FLINDERS LANE MELBOURNE VIC AUSTRALIA 8009	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: IS305100	Date Samples Received	: 17-Jun-2020
Order number	: 1578	Date Analysis Commenced	: 03-Jul-2020
C-O-C number	: ----	Issue Date	: 06-Jul-2020
Sampler	: ----		
Site	: ----		
Quote number	: ME/473/20		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

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

This Quality Control Report contains the following information:

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

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

Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC

General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)C: Leachable Metals by ICPAES (QC Lot: 3120245)									
EM2009989-006	Anonymous	EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.00	No Limit

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 3120245)								
EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	1 mg/L	106	81.9	111

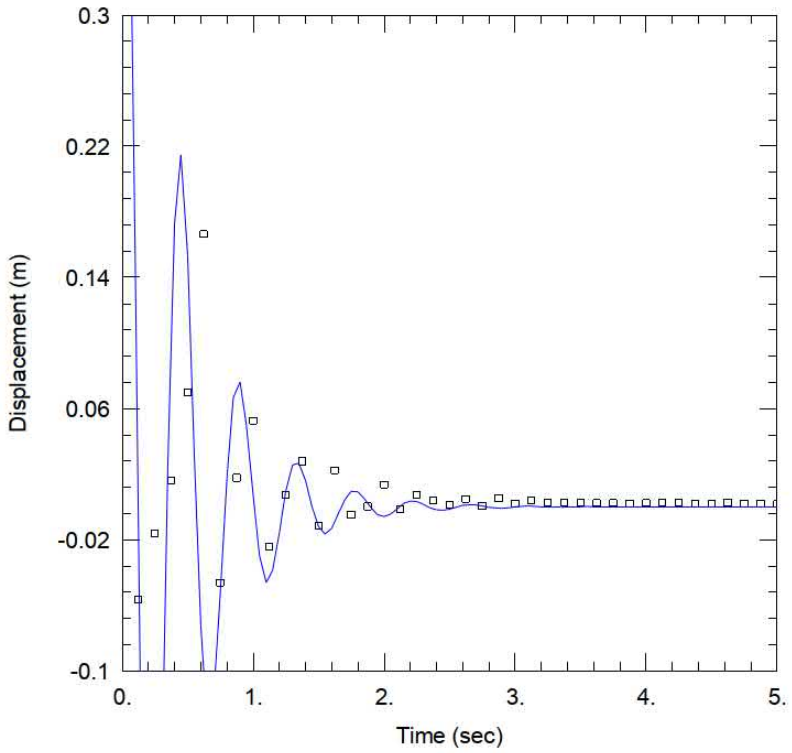
Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 3120245)							
EM2011438-001	STP09_0.4	EG005C: Nickel	7440-02-0	1 mg/L	95.6	88.0	116

Appendix I. Slug test analysis



WELL TEST ANALYSIS

Data Set: \...\Test1_bulter.aqt
Date: 07/02/20 Time: 17:20:28

PROJECT INFORMATION

Company: Jacobs
Client: Prospect Hill
Project: IS305100
Location: Prospect Hill
Test Well: MW2001

AQUIFER DATA

Saturated Thickness: 15. m Anisotropy Ratio (Kz/Kr): 0.1

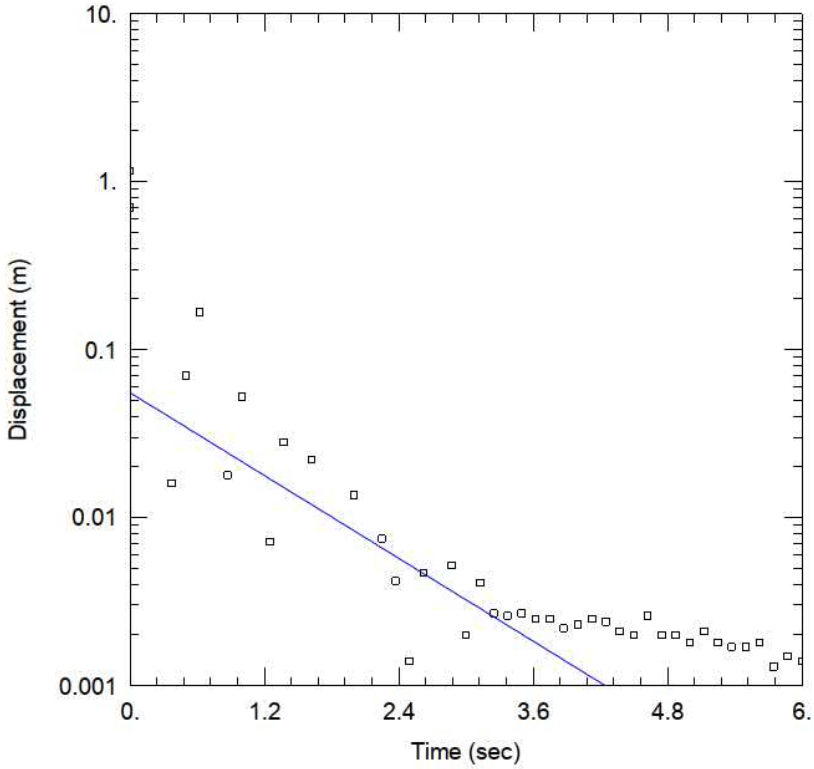
WELL DATA (MW2001)

Initial Displacement: 0.6 m
Total Well Penetration Depth: 1.75 m
Casing Radius: 0.025 m
Static Water Column Height: 1.7 m
Screen Length: 1.75 m
Well Radius: 0.025 m

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 4460.3 m/day Le = 0.04751 m



WELL TEST ANALYSIS

Data Set: \...\Test1_Bouwer2.aqt
Date: 07/02/20 Time: 17:22:04

PROJECT INFORMATION

Company: Jacobs
Client: Prospect Hill
Project: IS305100
Location: Prospect Hill
Test Well: MW001

AQUIFER DATA

Saturated Thickness: 15. m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW2001)

Initial Displacement: 0.7 m Static Water Column Height: 1.7 m
Total Well Penetration Depth: 1.75 m Screen Length: 1.75 m
Casing Radius: 0.025 m Well Radius: 0.025 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 54.85 m/day y0 = 0.05547 m

Appendix J. Results Tables

		Metals																			Soil Properties					Exchangeable Cations							Inorganics																		Asbestos						Physiochemical parameters			TRH - NEPM 2013 Fractions							TPH - NEP	
		Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Organic Matter	Moisture Content	Moisture Content (dried @ 103°C)	Density	Clay in soils <2um	Exchangeable Potassium	Magnesium/Potassium Ratio	Exchangeable Calcium	Exchangeable Calcium Percent	Exchangeable Potassium Percent	Exchangeable Sodium	Exchangeable Sodium %	Exchangeable Magnesium	Exchangeable Magnesium Percent	Calcium/Magnesium Ratio	Ammonia as N	Cation exchange capacity	Chloride	Cyanide Total	Electrical conductivity (lab)	Fluoride	Kjeldahl Nitrogen Total	Nitrate (as N)	Nitrite (as N)	Nitrogen (Total Oxidised)	Nitrogen (Total)	Phosphorus	Sulphate	Total Organic Carbon	E. Coli (MPN/100 mL)	Sample Weight	Asbestos fibres	Asbestos (Trace)	Organic fibre	Synthetic mineral fibre	Approved Identifier	pH (lab)	pH (aqueous extract)	pH (CaCl2)	TRH >C6 - C10	TRH >C10 - C16	TRH >C16 - C34	TRH >C34 - C40	TRH >C10 - C40 (Sum of total)	TRH >C6 - C10 less BTEX (F1)	TRH >C10 - C16 less Naphthalene (F2)	TPH C6 - C9	TPH C10 - C14
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	g/cm3	%	eq/10	-	eq/10	%	%	eq/10	%	eq/10	%	-	mg/kg	eq/10	mg/kg	mg/kg	uS/cm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	MPN/100 m	mg	Presence	Presence	Presence	Presence	Commen	pH Units	pH Units	pH Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Beneficial Uses	EQL	5	10	1	50	1	0.5	2	2	5	0.01	5	5	0.1	2	2	5	2	5	5	0.5	1	1	0.01	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	0.2	10	1	1	40	20	0.1	0.1	0.1	20	2	10	0.5	1000	10						0.1	0.1	0.1	10	50	100	100	50	10	50	10	50
Maintenance of Ecosystems	NEPM 2013 EIL -Urban residential (Fill)	100						570		230		1100				350				970																					400[#1]																											
	NEPM 2013 EIL -Commercial and industrial (Fill)	160						950		330		1800				590				1500																					1000[#1]																											
	NEPM 2013 EIL -Urban residential (Natural)	100						680		220		1100				330				910																					400[#1]																											
	NEPM 2013 EIL -Commercial and industrial (Natural)	160						1100		320		1800				550				1400																					1000[#1]																											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Urban Residential/Public Open Space																																																													300	2800		180	120		
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Commercial/Industrial																																																													1700	3300		215	170		
Human Health	NEPM 2013 Table 1A(1) HIL A Soil	100		60	4500	20	100		100	6000		300	3800	40		400	200			7400																					3100[#2]		130000[#2]	7800[#2]																								
	NEPM 2013 Table 1A(3) HSL A/B Sand for Vapour Intrusion; 0-1m																																																																45	110		
	NEPM 2013 Table 1A(1) HIL C Soil	300		90	20000	90	300		300	17000		600	19000	80		1200	700			30000																																																
	NEPM 2013 Table 1A(1) HIL D Soil	3000		500	300000	900	3600		4000	240000		1500	60000	730		6000	10000			400000																					47000[#2]		1900000[#2]	120000[#2]																								
	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion; 0-1m																																																																260	NL		
Other	AS2159-2009 Buildings & Structures																																					5000										5000									5-14	5-14	5-14									

Sample ID	Location	Depth	Date	Report No.	Matrix	Sample type	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Organic Matter	Moisture Content	Moisture Content (dried @ 103°C)	Density	Clay in soils <2um	Exchangeable Potassium	Magnesium/Potassium Ratio	Exchangeable Calcium	Exchangeable Calcium Percent	Exchangeable Potassium Percent	Exchangeable Sodium	Exchangeable Sodium %	Exchangeable Magnesium	Exchangeable Magnesium Percent	Calcium/Magnesium Ratio	Ammonia as N	Cation exchange capacity	Chloride	Cyanide Total	Electrical conductivity (lab)	Fluoride	Kjeldahl Nitrogen Total	Nitrate (as N)	Nitrite (as N)	Nitrogen (Total Oxidised)	Nitrogen (Total)	Phosphorus	Sulphate	Total Organic Carbon	E. Coli (MPN/100 mL)	Sample Weight	Asbestos fibres	Asbestos (Trace)	Organic fibre	Synthetic mineral fibre	Approved Identifier	pH (lab)	pH (aqueous extract)	pH (CaCl2)	TRH >C6 - C10	TRH >C10 - C16	TRH >C16 - C34	TRH >C34 - C40	TRH >C10 - C40 (Sum of total)	TRH >C6 - C10 less BTEX (F1)	TRH >C10 - C16 less Naphthalene (F2)	TPH C6 - C9	TPH C10 - C14
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	<5	-	-	-	<1	-	66	-	18	-	10	-	<0.1	-	48	-	-	-	17	-	27.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	-	66	-	20	-	<5	-	<0.1	-	64	-	-	-	35	-	19.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	6	-	-	-	<1	-	49	-	24	-	<5	-	<0.1	-	66	-	-	-	30	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	-	59	-	18	-	<5	-	<0.1	-	58	-	-	-	23	-	17.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	8	-	-	-	<1	-	54	-	30	-	<5	-	<0.1	-	98	-	-	-	36	-	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	60	24	20	-	<5	444	<0.1	<2	74	<5	<2	<5	30	-	29.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<5	-	<1	<50	<1	<0.5	57	22	23	-	<5	472	<0.1	<2	94	<5	<2	<5	23	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	22	-	<5	-	<0.1	<2	73	<5	<2	<5	34	-	18.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	48	19	16	-	9	410	<0.1	<2	44	<5	<2	<5	23	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	130	-	-	39,100	No	No	Yes	No	Yes	-	-	7.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	6	-	<1	<50	<1	<0.5	49	21	27	-	<5	419	<0.1	<2	76	<5	<2	<5	33	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	520	-	-	43,100	No	No	No	No	Yes	-	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	67	25	28	-	<5	441	<0.1	<2	85	<5	<2	<5	36	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-		-	-	-	-	-	-	520	-	-	39,300	No	No	No	No	Yes	-	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	20	-	<5	-	<0.1	<2	83	<5	<2	<5	28	-	21.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<5	-	-	-	<1	<0.5	-	-	18	-	<5	-	<0.1	<2	63	<5	<2	<5	26	-	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	280	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	4.3	-	-	-	<0.4	<1	70	-	23	-	5.6	-	<0.1	<5	76	<2	<0.2	<10	40	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.9	-	<20	<50	<100	<100	<100	<20	<50	<20	<20
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	8	-	<1	<50	<1	<0.5	53	21	26	-	<5	675	<0.1	<2	85	<5	<2	<5	32	-	14.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	400	-	-	42,000	No	No	No	No	Yes	-	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	7	-	<1	<50	<1	<0.5	58	28	23	-	<5	516	<0.1	<2	54	<5	<2	<5	24	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	750	-	-	42,000	No	No	No	No	Yes	-	-	8.4	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	19	-	7	-	<0.1	<2	52	<5	<2	<5	22	-	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	46	33	35	-	<5	501	<0.1	<2	126	<5	<2	<5	51	-	12.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	380	-	-	43,500	No	No	No	No	Yes	-	-	8.6	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	33	-	<5	-	<0.1	<2	100	<5	<2	<5	46	-	18.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	61	27	29	-	<5	403	<0.1	<2	94	<5	<2	<5	40	-	15.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	430	-	-	41,200	No	No	Yes	No	Yes	-	-	8.2	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<5	-	1	<50	<1	<0.5	52	37	38	-	<5	405	<0.1	<2	123	<5	<2	<5	51	-	14.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	320	-	-	44,600	No	No	No	No	Yes	-	-	8.6	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	51	16	21	-	<5	376	<0.1	<2	61	<5	<2	<5	29	-	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	660	-	-	41,300	No	No	No	No	Yes	-	-	8.3	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	7	-	-	-	<1	<0.5	-	-	22	-	6	-	<0.1	<2	67	<5	<2	<5	27	-	22.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	54	19	23	-	<5	412	<0.1	<2	66	<5	<2	<5	28	-	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	430	-	-	42,800	No	No	No	No	Yes	-	-	8.2	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	17	-	7	-	<0.1	<2	55	<5	<2	<5	21	-	22.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	44	17	23	-	<5	294	<0.1	<2	63	<5	<2	<5	27	-	13.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	570	-	-	38,700	No	No	No	No	Yes	-	-	8.2	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	8	-	<1	<50	<1	<0.5	47	24	33	-	<5	434	<0.1	<2	99	<5	<2	<5	40	-	22.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<50	-	-	40,500	No	No	No	No	Yes	-	-	8.3	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	1	<50	<1	<0.5	53	18	18	-	7	360	<0.1	<2	56	<5	<2	<5	20	-	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	300	-	-	38,900	No	No	No	No	Yes	-	-	8	<10	<50	<100	<100	<50	<10	<50	<10	<50
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	35	25	28	-	<5	565	<0.1	<2	83	<5	<2	<5	46	-	11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	240	-	-	43,800	No	No	No	No	Yes	-	-	8.2	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	7	-	<1	<50	<1	<0.5	56	23	21	3.97	<5	629	<0.1	<2	76	<5	<2	<5	30	<0.5	26.3	-	2.64	30	1.2	8.1	3.4	15.4	5.3	7.8	35.9	9.5	43.4	0.4	<20	21.9	500	<1	852	80	150	0.3	<0.1	0.3	150	502	430	<0.5	<1200	31,100	No	No	No	No	Yes	8.8 - 9.8	-	8.6	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	52	17	20	3.93	<5	395	<0.1	<2	61	<5	<2	<5	43	0.6	16	-	2.59	39	1.5	8	6.1	21.8	5.2	8.7	31.2	11.7	41.8	0.5	<20	28	1090	<1	1370	370	320	48.1	<0.1	48.1	370	231	470	<0.5	-	-	-	-	-	-	-	7.8 - 9.2	-	8.3	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	5	-	<1	<50	<1	<0.5	53	20	20	-	<5	430	<0.1	<2	64	<5	<2	<5	26	-	21.3	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	-	<1	-	300	150	0.1	<0.1	0.1	150	162	-	-	<1200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	<5	-	<1	<50	<1	<0.5	51	15	18	-	<5	288	<0.1	<2	56	<5	<2	<5	22	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	5.8	370	-	36	<0.4	-	65	21	22	-	18	420	-	<5	73	<2	<0.2	<10	34	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	68	19	18	-	9	294	<0.1	<2	43	<5	<2	<5	12	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	<1	-	320	1440	33.6	0.6	34.2	1470	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	56	18	21	-	<5	430	<0.1	<2	68	<5	<2	<5	29	-	14.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600	-	-	-	-	-	-	-	-	-	590	-	-	39,500	No	No	No	No	Yes	9.4	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	66	18	13	-	9	346	<0.1	<2	53	<5	<2	<5	15	-	29.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1140	-	-	-	-	-	-	-	-	-	350	-	-	-	-	-	-	-	-	8.7	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	<5	-	1	<50	<1	<0.5	63	20	19	-	8	518	<0.1	<2	51	<5	<2	<5	27	-	23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	<5	-	<1	<50	<1	<0.5	60	19	15	-	10	419	<0.1	<2	37	<5	<2	<5	22	-	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	76	20	20	3.98	<5	635	<0.1	<2	59	<5	<2	<5	34	<0.5	20.4	-	2.59	27	1.6	8.8	8	22.2	4.4	12.4	34.6	13.9	38.8	0.6	<20	35.8	930	<1	1080	130	220	0.1	<0.1	0.1	220	362	480	<0.5	<1200	42,000	No	No	No	No	Yes	9.2 - 9.6	-	8.5	<10	<50	<100	<100	<50	<10	<50	<10	<50
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	71	24	18	4.5	10	518	<0.1	<2	63	<5	<2	<5	13	2.9	18.8	-	2.42	56	3	3.4	5.8	23.4	12.3	5.6	22.4	10.4	41.9	0.6	<20	24.8	890	<1	1080	390	1780	49.3	<0.1	49.3	1830	214	60	1.7	-	-	-	-	-	-	-	7.5 - 8.4	-	6.3	<10	<50	<100	<100	<50	<10	<50	<10	<50

#1: Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health - "Residential/Parkland" and "Commercial"

#2: USEPA Regional Screening Levels, Residential and Industrial Soil

							M 1999 Fractions			BTEXN								PAHs																				Monocyclic Aromatic Hydrocarbons (MAHs)										Chlorinated Hydrocarbons																											
							TPH C15 - C28	TPH C29-C36	TPH C10 - C36 (Sum of total)	Benzene	Ethylbenzene	Naphthalene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	Benzo[b+j]fluoranthene	Benzo(a)pyrene TEQ calc (zero)	Benzo(a)pyrene TEQ calc(half)	Benzo(a)pyrene TEQ calc(PQL)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j) & Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	PAHs (Sum of total)	Monocylic aromatic hydrocarbons EPAVic	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Total MAH	tert-butylbenzene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene (TCE)	Tetrachloroethene (PCE)	trans-1,2-dichloroethene
						Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Beneficial Uses						EQL	100	100	50	0.2	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	0.01	0.02	0.04	0.5	0.01	0.5	0.5	0.02	0.5	0.5	0.5	0.5	0.5	0.5	0.01	0.5	5	0.02	5	0.01	0.5	0.5	0.4	0.02	0.02	0.02	0.02
Maintenance of Ecosystems	NEPM 2013 EIL -Urban residential (Fill)											170																																																															
	NEPM 2013 EIL -Commercial and industrial (Fill)											370																																																																
	NEPM 2013 EIL -Urban residential (Natural)											170																																																																
	NEPM 2013 EIL -Commercial and industrial (Natural)											370																																																																
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Urban Residential/Public Open Space									50	70		85				105									0.7																																																				
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Commercial/Industrial									75	165		135				180									1.4																																																					
Human Health	NEPM 2013 Table 1A(1) HIL A Soil																																				300																																						
	NEPM 2013 Table 1A(3) HSL A/B Sand for Vapour Intrusion; 0-1m									0.5	55	3	160				40																																																															
	NEPM 2013 Table 1A(1) HIL C Soil																																				300																																						
	NEPM 2013 Table 1A(1) HIL D Soil																																				4000																																						
	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion; 0-1m									3	NL	NL	NL				230																																																												
Other	AS2159-2009 Buildings & Structures																																																																											
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample type																																																																		
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	<50	<50	<50	<0.1	<0.1	<0.5	<0.1	-	<0.2	<0.1	<0.3	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5

#1: Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health - "Residential/Parkland" and "Commercial"

#2: USEPA Regional Screening Levels, Residential and Industrial Soil

									Volatile Organic Compounds (VOCs)							Organic Comp		genate	Halogenated Benzenes										Halogenated Hydrocarbons					Phenols																					Solvents							Polychlorinated Biphenyls								rbama					
							trans-1,3-dichloropropene	Vinyl chloride	Total Chlorinated Hydrocarbons VIC EPA	Total Other Chlorinated Hydrocarbons VIC EPA	1,1-dichloropropene	cis-1,4-Dichloro-2-butene	Pentachloroethane	Styrene	trans-1,4-Dichloro-2-butene	3- & 4-Methylphenol	Piperonyl butoxide	Dinoseb	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,3,5,6-Tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2.3.4.5 & 2.3.4.6-Tetrachlorophenol	2-chlorophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-nitrophenol	Pentachlorophenol	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Sum of Phenols (halogenated)	Phenols (Total Non Halogenated)	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Vinyl acetate	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Methiocarb	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC
						Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Beneficial Uses						EQL	0.5	0.02	0.01	0.01	0.5	0.5	0.5	0.5	0.5	1000	0.05	5	0.5	0.01	0.02	0.5	0.02	0.5	0.5	0.5	0.02	30	0.5	5	5	0.5	5	0.03	0.05	0.05	0.03	0.5	5	0.03	0.05	0.03	0.5	0.5	5	5	0.03	5	0.2	0.5	10	1	0.03	20	5	5	5	0.5	0.5	0.5	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.05	0.03	0.03	0.03	0.03
Maintenance of Ecosystems	NEPM 2013 EIL -Urban residential (Fill)																																																																											
	NEPM 2013 EIL -Commercial and industrial (Fill)																																																																												
	NEPM 2013 EIL -Urban residential (Natural)																																																																												
	NEPM 2013 EIL -Commercial and industrial (Natural)																																																																											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Urban Residential/Public Open Space																																																																											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Commercial/Industrial																																																																											
Human Health	NEPM 2013 Table 1A(1) HIL A Soil																											10000																						100	3000																			1					6	
	NEPM 2013 Table 1A(3) HSL A/B Sand for Vapour Intrusion; 0-1m																																																																											
	NEPM 2013 Table 1A(1) HIL C Soil																											10000																						120	40000																			1					10	
	NEPM 2013 Table 1A(1) HIL D Soil																											80000																						660	240000																			7					45	
	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion; 0-1m																																																																											
Other	AS2159-2009 Buildings & Structures																																																																											
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample type																																																																							
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	-	<400	-	<20	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	<1	<0.5	<0.5	<5	<0.5	-	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<0.5	<10	<1	-	<20	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.03	<0.03	<0.03	<0.03
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	<0.05	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	<0.05	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05

#1: Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health - "Residential/Parkland" and "Commercial"

#2: USEPA Regional Screening Levels, Residential and Industrial Soil

							Organochlorine Pesticides (OCPs)																				Organophosphorous Pesticides (OPPs)																			Herbicides														Pesticides													Synthet		
							Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenthion	Malathion	Methyl parathion	Monocrotophos	Parathion	Pirimphos-ethyl	Prothiofos	2,4,5-Trichlorophenoxy Acetic Acid	2,4,5-TP (Silvex)	2,4-Dichlorprop	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Fluroxypyr	Hedonal	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Picloram	Triclopyr	3-Hydroxy Carbofuran	Aldicarb	Bendiocarb	Bifenthrin	Bioresmethrin	Carbaryl	Carbofuran	Cyhalothrin/Karate	Cypermethrins(total)	Methomyl	Oxamyl	Permethrin	Thiodicarb	Fenvalerate & Esfenvalerate	Tetramethrin	Baythroid
						Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Beneficial Uses						EQL	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.03	0.05	0.03	0.03	0.03	0.03	0.03	0.05	0.03	0.03	0.03	0.03	2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2	0.05	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.05	0.02	0.02	0.05	0.05	0.02	0.02	0.05	0.02	0.05	0.05	0.05
Maintenance of Ecosystems	NEPM 2013 EIL -Urban residential (Fill)										180																																																															
	NEPM 2013 EIL -Commercial and industrial (Fill)										640																																																																
	NEPM 2013 EIL -Urban residential (Natural)										180																																																																	
	NEPM 2013 EIL -Commercial and industrial (Natural)										640																																																																
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Urban Residential/Public Open Space																																																																											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Commercial/Industrial																																																																											
Human Health	NEPM 2013 Table 1A(1) HIL A Soil						50						240		270				10				6		300	20					160															600								900	600	600	600	4500					600												
	NEPM 2013 Table 1A(3) HSL A/B Sand for Vapour Intrusion; 0-1m																																																																												
	NEPM 2013 Table 1A(1) HIL C Soil						70						400		340				20				10		400	30					250															800								1300	800	800	800	5700					730												
	NEPM 2013 Table 1A(1) HIL D Soil						530						3600		2000				100				50		2500	160					2000															5000								9000	5000	5000	5000	35000					4500												
	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion; 0-1m																																																																												
Other	AS2159-2009 Buildings & Structures																																																																											
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample type																																																																						
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#1: Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health - "Residential/Parkland" and "Commercial"

#2: USEPA Regional Screening Levels, Residential and Industrial Soil

								c Pyrethroids by GCMS				
								Tau-fluvalinate	Allethrin	Deltamethrin & Tralomethrin	Phenothrin	Transfluthrin
							Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Beneficial Uses							EQL	0.05	0.05	0.05	0.05	0.05
Maintenance of Ecosystems	NEPM 2013 EIL -Urban residential (Fill)											
	NEPM 2013 EIL -Commercial and industrial (Fill)											
	NEPM 2013 EIL -Urban residential (Natural)											
	NEPM 2013 EIL -Commercial and industrial (Natural)											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Urban Residential/Public Open Space											
	NEPM 2013 Table 1B(6) ESL, Coarse Soil, Commercial/Industrial											
Human Health	NEPM 2013 Table 1A(1) HIL A Soil											
	NEPM 2013 Table 1A(3) HSL A/B Sand for Vapour Intrusion; 0-1m											
	NEPM 2013 Table 1A(1) HIL C Soil											
	NEPM 2013 Table 1A(1) HIL D Soil											
	NEPM 2013 Table 1A(3) HSL D Sand for Vapour Intrusion; 0-1m											
Other	AS2159-2009 Buildings & Structures											
	Sample ID	Location	Depth	Date	Report No.	Matrix	Sample type					
	HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-
	HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	-	-	-	-
	STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	-	-	-	-
	QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	-	-	-	-	-
	STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-
	TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05
	TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-
	TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05
	QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-
	QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-
	TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-
	TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-
	TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-
	TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-
	TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-
	TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05
	TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-

#1: Canadian Council of Ministers of the Environment (CCME) (2002) Soil Quality Guidelines for the Protection of Environmental and Human Health - "Residential/Parkland" and "Commercial"

#2: USEPA Regional Screening Levels, Residential and Industrial Soil

					Sample ID	MW001_1.5	STP09_0.4	STP12_0.7	TP05_0.8
					Location	MW001	STP09	STP12	TP05
					Depth	1.5	0.4	0.7	0.8
					Date	18/06/2020	17/06/2020	17/06/2020	16/06/2020
					Report No.	EM2011438	EM2011438	EM2011438	EM2011438
					Matrix	Soil	Soil	Soil	Soil
					Matrix Description				
				EPA IWRG 621 Category B Leached	EPA IWRG 621 Category C Leached				
Chem_Group	**ChemName**	**Unit**	**EQL**						
Metals	Nickel	µg/L	100	**8000**	**2000**	<100	<100	<100	<100

							Metals																				Exchangeable Ions									Soil Properties					Inorganics													
							Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Zinc	Exchangeable Magnesium	Exchangeable Magnesium Percent	Exchangeable Potassium	Magnesium/Potassium Ratio	Exchangeable Calcium	Exchangeable Calcium Percent	Exchangeable Potassium Percent	Exchangeable Sodium	Exchangeable Sodium %	Organic Matter	Moisture Content	Moisture Content (dried @ 103°C)	Density	Clay in soils <2um	Calcium/Magnesium Ratio	Ammonia as N	Cation exchange capacity	Chloride	Cyanide Total	Electrical conductivity (lab)	Fluoride	Kjeldahl Nitrogen Total	Nitrate (as N)	Nitrite (as N)	Nitrogen (Total Oxidised)	Nitrogen (Total)	Phosphorus	Sulphate
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	eq/100	%	eq/100	-	eq/100	%	%	eq/100	%	%	%	%	g/cm3	%	-	mg/kg	eq/100	mg/kg	mg/kg	uS/cm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	5	10	1	50	1	0.5	2	2	5	0.005	5	5	0.1	2	2	5	2	5	5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1	1	0.01	1	0.2	20	0.2	10	1	1	40	20	0.1	0.1	0.1	20	2	10
EPA IWRG 621 Category B							**2000**				**400**	**2000**			**20000**		**6000**		**300**	**4000**	**12000**	**200**	**720**		**140000**																			**10000**		**40000**							
EPA IWRG 621 Category C							**500**				**100**	**500**			**5000**		**1500**		**75**	**1000**	**3000**	**50**	**180**	**500**	**35000**																		**2500**		**10000**							
EPA IWRG 621 Fill Material							**20**				**3**	**1**			**100**		**300**		**1**	**40**	**60**	**10**	**10**	**50**	**200**																		**50**		**450**							
Sample ID	**Location**	**Depth**	**Date**	**Report No.**	**Matrix**	**Sample type**																																															
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	<5	-	-	-	<1	-	66	-	18	-	10	-	<0.1	-	48	-	-	-	17	-	-	-	-	-	-	-	-	-	-	27.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	-	66	-	20	-	<5	-	<0.1	-	64	-	-	-	35	-	-	-	-	-	-	-	-	-	-	19.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	6	-	-	-	<1	-	49	-	24	-	<5	-	<0.1	-	66	-	-	-	30	-	-	-	-	-	-	-	-	-	-	13.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	-	59	-	18	-	<5	-	<0.1	-	58	-	-	-	23	-	-	-	-	-	-	-	-	-	-	17.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	8	-	-	-	<1	-	54	-	30	-	<5	-	<0.1	-	98	-	-	-	36	-	-	-	-	-	-	-	-	-	-	20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	60	24	20	-	<5	444	<0.1	<2	74	<5	<2	<5	30	-	-	-	-	-	-	-	-	-	-	29.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<5	-	<1	<50	<1	<0.5	57	22	23	-	<5	472	<0.1	<2	94	<5	<2	<5	23	-	-	-	-	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	22	-	<5	-	<0.1	<2	73	<5	<2	<5	34	-	-	-	-	-	-	-	-	-	-	18.9	-	-	-	-	-	-	-	-	<1	-	380	-	-	-	-	-	-	-
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	48	19	16	-	9	410	<0.1	<2	44	<5	<2	<5	23	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	130
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	6	-	<1	<50	<1	<0.5	49	21	27	-	<5	419	<0.1	<2	76	<5	<2	<5	33	-	-	-	-	-	-	-	-	-	-	16.5	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	520
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	67	25	28	-	<5	441	<0.1	<2	85	<5	<2	<5	36	-	-	-	-	-	-	-	-	-	-	16.5	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	520
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	20	-	<5	-	<0.1	<2	83	<5	<2	<5	28	-	-	-	-	-	-	-	-	-	-	21.4	-	-	-	-	-	-	-	-	<1	-	310	-	-	-	-	-	-	-
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<5	-	-	-	<1	<0.5	-	-	18	-	<5	-	<0.1	<2	63	<5	<2	<5	26	-	-	-	-	-	-	-	-	-	-	17.5	-	-	-	-	-	-	-	-	<1	-	280	-	-	-	-	-	-	-
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	4.3	-	-	-	<0.4	<1	70	-	23	-	5.6	-	<0.1	<5	76	<2	<0.2	<10	40	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	<5	-	130	-	-	-	-	-	-	-
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	8	-	<1	<50	<1	<0.5	53	21	26	-	<5	675	<0.1	<2	85	<5	<2	<5	32	-	-	-	-	-	-	-	-	-	-	14.9	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	400
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	7	-	<1	<50	<1	<0.5	58	28	23	-	<5	516	<0.1	<2	54	<5	<2	<5	24	-	-	-	-	-	-	-	-	-	-	18.4	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	750
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	19	-	7	-	<0.1	<2	52	<5	<2	<5	22	-	-	-	-	-	-	-	-	-	-	15.5	-	-	-	-	-	-	-	-	<1	-	170	-	-	-	-	-	-	-
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	46	33	35	-	<5	501	<0.1	<2	126	<5	<2	<5	51	-	-	-	-	-	-	-	-	-	-	12.4	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	380
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	33	-	<5	-	<0.1	<2	100	<5	<2	<5	46	-	-	-	-	-	-	-	-	-	-	18.1	-	-	-	-	-	-	-	-	<1	-	260	-	-	-	-	-	-	-
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	61	27	29	-	<5	403	<0.1	<2	94	<5	<2	<5	40	-	-	-	-	-	-	-	-	-	-	15.2	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	430
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<5	-	1	<50	<1	<0.5	52	37	38	-	<5	405	<0.1	<2	123	<5	<2	<5	51	-	-	-	-	-	-	-	-	-	-	14.7	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	320
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	51	16	21	-	<5	376	<0.1	<2	61	<5	<2	<5	29	-	-	-	-	-	-	-	-	-	-	20.1	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	660
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	7	-	-	-	<1	<0.5	-	-	22	-	6	-	<0.1	<2	67	<5	<2	<5	27	-	-	-	-	-	-	-	-	-	-	22.8	-	-	-	-	-	-	-	-	<1	-	240	-	-	-	-	-	-	-
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	54	19	23	-	<5	412	<0.1	<2	66	<5	<2	<5	28	-	-	-	-	-	-	-	-	-	-	16.2	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	430
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	-	-	<1	<0.5	-	-	17	-	7	-	<0.1	<2	55	<5	<2	<5	21	-	-	-	-	-	-	-	-	-	-	22.3	-	-	-	-	-	-	-	-	<1	-	180	-	-	-	-	-	-	-
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	44	17	23	-	<5	294	<0.1	<2	63	<5	<2	<5	27	-	-	-	-	-	-	-	-	-	-	13.4	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	570
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	8	-	<1	<50	<1	<0.5	47	24	33	-	<5	434	<0.1	<2	99	<5	<2	<5	40	-	-	-	-	-	-	-	-	-	-	22.9	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	<50
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	1	<50	<1	<0.5	53	18	18	-	7	360	<0.1	<2	56	<5	<2	<5	20	-	-	-	-	-	-	-	-	-	-	20.1	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	300
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<5	-	<1	<50	<1	<0.5	35	25	28	-	<5	565	<0.1	<2	83	<5	<2	<5	46	-	-	-	-	-	-	-	-	-	-	11.5	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	240
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	7	-	<1	<50	<1	<0.5	56	23	21	3.97	<5	629	<0.1	<2	76	<5	<2	<5	30	9.5	43.4	1.2	8.1	3.4	15.4	5.3	7.8	35.9	<0.5	26.3	-	2.64	30	0.4	<20	21.9	500	<1	852	80	150	0.3	<0.1	0.3	150	502	430
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	52	17	20	3.93	<5	395	<0.1	<2	61	<5	<2	<5	43	11.7	41.8	1.5	8	6.1	21.8	5.2	8.7	31.2	0.6	16	-	2.59	39	0.5	<20	28	1090	<1	1370	370	320	48.1	<0.1	48.1	370	231	470
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	<5	-	<1	<50	<1	<0.5	51	15	18	-	<5	288	<0.1	<2	56	<5	<2	<5	22	-	-	-	-	-	-	-	-	-	-	17.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	5.8	370	-	36	<0.4	-	65	21	22	-	18	420	-	<5	73	<2	<0.2	<10	34	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	5	-	<1	<50	<1	<0.5	53	20	20	-	<5	430	<0.1	<2	64	<5	<2	<5	26	-	-	-	-	-	-	-	-	-	-	21.3	-	-	-	-	<20	-	-	<1	-	300	150	0.1	<0.1	0.1	150	162	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	68	19	18	-	9	294	<0.1	<2	43	<5	<2	<5	12	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	20	-	<1	-	320	1440	33.6	0.6	34.2	1470	196	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	56	18	21	-	<5	430	<0.1	<2	68	<5	<2	<5	29	-	-	-	-	-	-	-	-	-	-	14.9	-	-	-	-	-	-	1600	-	-	-	-	-	-	-	-	-	590
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	66	18	13	-	9	346	<0.1	<2	53	<5	<2	<5	15	-	-	-	-	-	-	-	-	-	-	29.3	-	-	-	-	-	-	1140	-	-	-	-	-	-	-	-	-	350
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	<5	-	1	<50	<1	<0.5	63	20	19	-	8	518	<0.1	<2	51	<5	<2	<5	27	-	-	-	-	-	-	-	-	-	-	23.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	<5	-	<1	<50	<1	<0.5	60	19	15	-	10	419	<0.1	<2	37	<5	<2	<5	22	-	-	-	-	-	-	-	-	-	-	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<5	-	<1	<50	<1	<0.5	76	20	20	3.98	<5	635	<0.1	<2	59	<5	<2	<5	34	13.9	38.8	1.6	8.8	8	22.2	4.4	12.4	34.6	<0.5	20.4	-	2.59	27	0.6	<20	35.8	930	<1	1080	130	220	0.1	<0.1	0.1	220	362	480
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<5	-	1	<50	<1	<0.5	71	24	18	4.5	10	518	<0.1	<2	63	<5	<2	<5	13	10.4	41.9	3	3.4	5.8	23.4	12.3	5.6	22.4	2.9	18.8	-	2.42	56	0.6	<20	24.8	890	<1	1080	390	1780	49.3	<0.1	49.3	1830	214	60

									Physiochemical parameter			Asbestos						TRH - NEPM 2013 Fractions							TPH - NEPM 1999 Fractions					BTEXN								PAHs																	
							Total Organic Carbon	E. Coli (MPN/100 mL)	pH (lab)	pH (aqueous extract)	pH (CaCl2)	Sample weight	Asbestos fibres	Asbestos (Trace)	Organic fibre	Synthetic mineral fibre	Approved Identifier	TRH >C6 - C10	TRH >C10 - C16	TRH >C16 - C34	TRH >C34 - C40	TRH >C10 - C40 (Sum of total)	TRH >C6 - C10 less BTEX (F1)	TRH >C10 - C16 less Naphthalene (F2)	TPH C6 - C9	TPH C10 - C14	TPH C15 - C28	TPH C29-C36	TPH C10 - C36 (Sum of total)	Benzene	Ethylbenzene	Naphthalene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	Benzo[b+j]fluoranthene	Benzo(a)pyrene TEQ calc (zero)	Benzo(a)pyrene TEQ calc(half)	Benzo(a)pyrene TEQ calc(PQL)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j) & Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
						Unit	%	MPN/100 m	pH Units	pH Units	pH Units	mg	Presence	Presence	Presence	Presence	Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	0.5	1000	0.1	0.1	0.1	10						10	50	100	100	50	10	50	10	50	100	100	50	0.2	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPA IWRG 621 Category B											**2-12.5**														**2600**			**40000**		**16**															**20**											
EPA IWRG 621 Category C											**4-9**														**650**			**10000**		**4**															**5**											
EPA IWRG 621 Fill Material											**4-9**														**100**			**1000**		**1**															**1**											
Sample ID	**Location**	**Depth**	**Date**	**Report No.**	**Matrix**	**Sample typ**																																																	
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.4	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	7.5	39,100	No	No	Yes	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.5	43,100	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.5	39,300	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.5	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	-	-	-	8.5	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	-	-	-	9.9	-	-	-	-	-	-	-	<20	<50	<100	<100	<100	<20	<50	<20	<20	<50	<50	<50	<0.1	<0.1	<0.5	<0.1	-	<0.2	<0.1	<0.3	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.5	42,000	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.4	42,000	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.4	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.6	43,500	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.4	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.2	41,200	No	No	Yes	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.6	44,600	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.3	41,300	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.3	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.2	42,800	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.2	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.2	38,700	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.3	40,500	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8	38,900	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	8.2	43,800	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<1200	8.8 - 9.8	-	8.6	31,100	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.5	-	7.8 - 9.2	-	8.3	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	<1200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	9.4	-	-	39,500	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	-	-	8.7	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<1200	9.2 - 9.6	-	8.5	42,000	No	No	No	No	Yes	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	1.7	-	7.5 - 8.4	-	6.3	-	-	-	-	-	-	<10	<50	<100	<100	<50	<10	<50	<10	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

								Monocyclic Aromatic Hydrocarbons (MAHs)										Chlorinated Hydrocarbons																																Volatile Organic Compounds (VOCs)							SVOCs	genate	
								PAHs (Sum of total)	Monocylic aromatic hydrocarbons EPAVic	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Total MAH	tert-butylbenzene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Trichloroethene (TCE)	Tetrachloroethene (PCE)	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Total Chlorinated Hydrocarbons VIC EPA	Total Other Chlorinated Hydrocarbons VIC EPA	1,1-dichloropropene	cis-1,4-Dichloro-2-butene	Pentachloroethane	Styrene	trans-1,4-Dichloro-2-butene	3- & 4-Methylphenol	Piperonyl butoxide	Dinoseb
							Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg
							EQL	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	0.01	0.02	0.04	0.5	0.01	0.5	0.5	0.02	0.5	0.5	0.5	0.5	0.5	0.5	0.01	0.5	5	0.02	5	0.01	0.5	0.5	0.4	0.02	0.02	0.02	0.02	0.5	0.02	0.01	0.01	0.5	0.5	0.5	0.5	0.5	1000	0.05	5
EPA IWRG 621 Category B																																											**11**				**4.8**										
EPA IWRG 621 Category C																																											**2.8**				**1.2**										
EPA IWRG 621 Fill Material																																																									
Sample ID	**Location**	**Depth**	**Date**	**Report No.**	**Matrix**	**Sample typ**																																																				
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	<0.5	-	<0.5	<0.5	<0.5	-	-	-	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	-	<400	-	<20
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.2	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.02	<0.04	-	<0.01	-	-	<0.02	-	-	-	-	-	-	<0.01	-	-	<0.02	-	<0.01	-	-	<0.4	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.01	<0.01	-	-	-	<0.5	-	<1000	-	<5
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	<0.05	-
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	<0.05	-
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1000	-	-

							Halogenated Benzenes										Halogenated Hydrocarbons				
							1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	0.5	0.01	0.02	0.5	0.02	0.5	0.5	0.5	0.02	30	0.5	5	5	0.5	5
EPA IWRG 621 Category B																					
EPA IWRG 621 Category C																					
EPA IWRG 621 Fill Material																					
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample typ															
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<5	<5	<0.5	<5
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<5	<5	<0.5	<5
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.01	<0.02	-	<0.02	-	-	-	<0.02	<30	-	-	-	-	-
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<5	<5	<0.5	<5

							Phenols																												Solvents							Polychlorinated Biphenyls							
							2,3,5,6-Tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,4-dimethylphenol	2,4-dinitrophenol	2,6-dichlorophenol	2,3,4,5 & 2,3,4,6-Tetrachlorophenol	2-chlorophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-nitrophenol	Pentachlorophenol	Phenol	Tetrachlorophenols	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Vinyl acetate	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	0.03	0.05	0.05	0.03	0.5	5	0.03	0.05	0.03	0.5	0.5	5	5	0.03	5	0.2	0.5	10	1	20	5	5	5	0.5	0.5	0.5	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EPA IWRG 621 Category B																									320	2200																		2
EPA IWRG 621 Category C																									10	560																		2
EPA IWRG 621 Fill Material																									1	60																		2
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample typ																																										
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	-	<1	<1	<0.5	<0.5	<5	<0.5	-	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<0.5	<10	<1	<20	<0.5	-	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<0.03	<0.05	<0.05	<0.03	<1	<5	<0.03	<0.05	<0.03	<1	<1	<5	<5	<0.03	<5	<0.2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	-	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	-	<0.5	-	<2	<0.5	-	-	-	<5	<5	<5	-	-	<0.5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1

							Organochlorine Pesticides (OCPs)																												Organophosphorous Pesticides (OPPs)																							
							4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenthion	Malathion	Methyl parathion	Monocrotophos	Parathion	Pirimphos-ethyl	Prothiofos	2,4,5-Trichlorophenoxy Acetic Acid	2,4,5-TP (Silvex)	2,4-Dichlorprop	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.03	0.05	0.03	0.03	0.03	0.03	0.03	0.05	0.03	0.03	0.03	0.03	2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2	0.05	0.05	0.02	0.02	0.02	0.02	0.02	0.02
EPA IWRG 621 Category B										**4.8**		**16**						**50**										**4.8**																													
EPA IWRG 621 Category C										**1.2**		**4**						**50**										**1.2**																													
EPA IWRG 621 Fill Material																																																								
Sample ID	**Location**	**Depth**	**Date**	**Report No.**	**Matrix**	**Sample typ**																																																			
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.05	<0.05	<0.05	<0.03	-	<0.03	<0.03	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	<0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	<0.05	-	-	-	-	-	-

							Herbicides								Pesticides																rbama	Synthetic Pyrethroids by GCMS				
							Dicamba	Fluroxypyr	Hedonal	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Picloram	Triclopyr	3-Hydroxy Carbofuran	Aldicarb	Bendiocarb	Bifenthrin	Bioresmethrin	Carbaryl	Carbofuran	Cyhalothrin/Karate	Cypermethrins(total)	Methomyl	Oxamyl	Permethrin	Thiodicarb	Fenvalerate & Esfenvalerate	Tetramethrin	Baythroid	Methiocarb	Tau-fluvalinate	Allethrin	Deltamethrin & Tralomethrin	Phenothrin	Transfluthrin
						Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						EQL	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.05	0.02	0.02	0.05	0.05	0.02	0.02	0.05	0.02	0.05	0.05	0.05	0.02	0.05	0.05	0.05	0.05	0.05
EPA IWRG 621 Category B																																				
EPA IWRG 621 Category C																																				
EPA IWRG 621 Fill Material																																				
Sample ID	Location	Depth	Date	Report No.	Matrix	Sample typ																														
HA01_0.1	HA01	0.1	17/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA02_0.4	HA02	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA03_0.45	HA03	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA04_0.4	HA04	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA05_0.4	HA05	0.4	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_0.2	MW001	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW001_1.5	MW001	1.5	18/06/2020	EM2010590	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP01_0.4	STP01	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP02_0.3	STP02	0.3	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP03_0.4	STP03	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP04_0.6	STP04	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP05_0.2	STP05	0.2	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200617	STP05	0.2	17/06/2020	EM2010590	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200617	STP05	0.2	17/06/2020	726669	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP06_0.6	STP06	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP07_0.6	STP07	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP08_0.4	STP08	0.45	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP09_0.4	STP09	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP10_0.6	STP10	0.6	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP11_0.4	STP11	0.4	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP12_0.7	STP12	0.7	17/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP13_0.2	STP13	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP14_0.2	STP14	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP15_0.2	STP15	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP16_0.2	STP16	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP17_0.2	STP17	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP18_0.2	STP18	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP19_0.2	STP19	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STP20_0.2	STP20	0.2	18/06/2020	EM2010590	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01_0.2	TP01	0.2	16/06/2020	EM2010198	Soil	Fill	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
TP01_2.0	TP01	2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA101_200616	TP02	0.2	16/06/2020	EM2010198	Soil	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA201_200616	TP02	0.2	16/06/2020	726502	Soil	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_0.2	TP02	0.2	16/06/2020	EM2010198	Soil	Fill	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
TP02_0.8	TP02	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.2	TP03	0.2	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03_0.9	TP03	0.9	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.3	TP04	0.3	16/06/2020	EM2010198	Soil	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.7	TP04	0.7	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05_0.2	TP05	0.2	16/06/2020	EM2010198	Soil	Fill	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.05	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
TP05_0.8	TP05	0.8	16/06/2020	EM2010198	Soil	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3a - ASS Rapid Oxidation Results

						Sample ID	TP01_0.2	TP01_2.0	TP03_0.2	TP03_0.9	TP05_0.2	TP05_0.8
						Location	TP01	TP01	TP03	TP03	TP05	TP05
						Depth	0.2	2	0.2	0.9	0.2	0.8
						Date	#########	16/06/2020	16/06/2020	#########	16/06/2020	16/06/2020
						Report No.	EM2010198	EM2010198	EM2010198	EM2010198	EM2010198	EM2010198
						Matrix	Soil	Soil	Soil	Soil	Soil	Soil
						Matrix Description	Fill	Fill	Fill	Natural	Fill	Natural
Chem Group	**ChemName**	**Unit**	**EQL**	**Normal Soil**	**PASS**	**ASS or PASS**						
pHF and pHFox	pHFOX (field peroxide test)*	pH Units	0.1	≥5	>3 and <5	≤3	10	9.6	9.9	6.6	9.9	4.7
	pH (F)	pH Units	0.1	≥5	>4 and <5	≤4	9.9	9.3	9.4	8.7	9.6	7.8
	ΔpH	pH Units	0.1	≤2	>2	>2	0.1	0.3	0.5	2.1	0.3	3.1
SPOCAS	Reaction Rate	-	1	1-2	≥2	≥2	4	4	4	3	4	3

Table 3b - ASS Chromium Reducible Sulfur Results

									Sample ID	TP01_0.2	TP01_2.0	TP03_0.2	TP03_0.9	TP05_0.2	TP05_0.8
									Location	TP01	TP01	TP03	TP03	TP05	TP05
									Depth	0.2	2	0.2	0.9	0.2	0.8
									Date	#########	16/06/2020	16/06/2020	16/06/2020	16/06/2020	16/06/2020
									Report No.	EM2010198	EM2010198	EM2010198	EM2010198	EM2010198	EM2010198
									Matrix	Soil	Soil	Soil	Soil	Soil	Soil
									Matrix Description	Fill	Fill	Fill	Natural	Fill	Natural
Chem Group	**ChemName**	**Unit**	**EQL**	**Sands and loamy sands**	**Sandy loams to light clays**	**Medium to heavy clays and silty clays**	**Sands and loamy sands**	**Sandy loams to light clays**	**Medium to heavy clays and silty clays**						
Acid Sulfate Soils (ASS)	ANC by Back Titration	mole H+/t	10	**Net Acidity Criteria** (1 - 1000 tonnes)			**Net Acidity Criteria** (>1000 tonnes)			9530	6150	4130	467	8480	-
SPOCAS	Acid Neutralising Capacity	%CaCO3	0.01							47.7	30.8	20.7	2.34	42.5	-
	ANC Fineness Factor	-	0.5							1.5	1.5	1.5	1.5	1.5	1.5
	Chromium Reducible Sulfur	%S	0.005							0.008	0.008	<0.005	<0.005	0.006	0.008
	acidity - Chromium Reducible Sulfur (a-22B)	mole H+/t	10							<10	<10	<10	<10	<10	<10
	Liming Rate	kg CaCO3/t	1							<1	<1	<1	<1	<1	1
	Liming Rate excluding ANC	kg CaCO3/t	1							<1	<1	<1	<1	<1	1
	Net Acidity (acidity units)	mole H+/t	10	**18**	**36**	**62**	**18**	**18**	**18**	<10	<10	<10	<10	<10	16
	Net Acidity (sulfur units)	%S	0.02	**0.03**	**0.06**	**0.1**	**0.03**	**0.03**	**0.03**	<0.02	<0.02	<0.02	<0.02	<0.02	0.02
	Net Acidity excluding ANC (sulfur units)	% S	0.02							<0.02	<0.02	<0.02	<0.02	<0.02	0.02
	pH (KCl)	pH units	0.1							9	8.8	9	8.1	8.9	5.8
	sulfidic - Titratable Actual Acidity	%S	0.02							<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	sulfidic-Acid Neutral	%S	0.01							15.3	9.86	6.62	0.75	13.6	-
	Titratable Actual Acidity	mole H+/t	2							<2	<2	<2	<2	<2	11

									Lab Report	EM2010819	728543	
									Sample ID	MW001_200625	QC01_200625	
									Location Code	MW001	MW001	
									Sample Type	Normal	Inter-lab_D	
									Date	25/06/2020	25/06/2020	
			Water-dependent Ecosystems and Species		Water-based Recreation (Primary Contact)		Agriculture and Irrigation (Stock	Buildings and Structures	Vapour Intrusion			
			ANZG (2018) Freshwater (unknown reliability) toxicant	ANZG (2018) Freshwater 95% toxicant DGVs	ADWG 2018 Aesthetic	NHMRC 2008 Recreational Water	ANZECC 2000 Stock Watering	AS2159-2009 Buildings & Structures	CRC Care HSL-D, 8m+ GW in Sand Soils			
Chem_Group	ChemName	Units								EQL		
Metals	Aluminium (Filtered)	µg/L		0.8	200		5000			0.01	<10	-
	Arsenic (Filtered)	µg/L		13		100	500			1	2	1
	Barium (Filtered)	µg/L				20000				1	15	-
	Beryllium (Filtered)	µg/L								1	<1	-
	Boron (Filtered)	µg/L		370		40000	5000			50	1500	-
	Cadmium (Filtered)	µg/L		0.2		20	10			0.1	<0.1	<0.2
	Chromium (hexavalent) (Filtered)	µg/L		1		0.5				10	10	-
	Chromium (III+VI) (Filtered)	µg/L					1000			1	6	4
	Cobalt (Filtered)	µg/L					1000			1	<1	-
	Copper (Filtered)	µg/L		1.4	1000		1000			1	4	3
	Lead (Filtered)	µg/L		3.4		100	100			1	<1	<1
	Magnesium (Filtered)	µg/L								1000	102,000	-
	Manganese (Filtered)	µg/L		1900	100					1	1	
	Mercury (Filtered)	µg/L		0.06a		10	2			0.1	<0.1	<0.1
	Molybdenum (Filtered)	µg/L	34			500	150			1	2	-
	Nickel (Filtered)	µg/L		11		200	1000			1	16	15
	Selenium (Filtered)	µg/L		5a		100	20			10	<10	-
	Silver (Filtered)	µg/L		0.05		1000				1	3	-
	Tin (Filtered)	µg/L								1	<1	-
	Zinc (Filtered)	µg/L		8	3000		20000			5	34	28
Inorganics	Carbonate Alkalinity as CaCO3	µg/L								1000	<1000	-
	Soluble Bicarb as CaCO3*	µg/L								1000	608000	-
	Alkalinity (Hydroxide) as CaCO3	µg/L								1000	<1000	-
	Alkalinity (total) as CaCO3	µg/L								1000	608000	-
	Ammonia as N	µg/L			412					10	20	-
	Anions Total	meq/L								10	67.5	-
	Calcium (Filtered)	µg/L								1000	49000	-
	Cations Total	meq/L								10	65.3	-
	Chloride	µg/L			250,000			1,000,000		1000	1680000	-
	Cyanide (Free)	µg/L								4	<4	-
	Cyanide Total	µg/L		7		800				4	<4	-
	Ionic Balance	%								10	1.64	-
	Kjeldahl Nitrogen Total	µg/L								100	1100	-
	Nitrate & Nitrite (as N)	µg/L								10	10200	-
	Nitrate (as N)	µg/L		2400b		112,900	90,300			10	10200	-
	Nitrite (as N)	µg/L				9100	9100			10	<10	-
	Nitrogen (Total)	µg/L		1100c						100	11300	-
	Phosphorus	µg/L		60c						10	20	-
	Potassium (Filtered)	µg/L								1000	20000	-
	Sodium (Filtered)	µg/L			180,000					1000	1240000	-
	Sulfate as SO4 - Turbidimetric (Filtered)	µg/L						1,000,000		1000	381000	-
	Total Dissolved Solids	µg/L			600,000					10000	3870000	-
Other	pH (lab)	pH Units						5-14		0.01	7.25	-
	Escherichia coli (Colilert)	org/100mL		0			0			1	0	
TRH - NEPM 2013 Fractions	TRH >C6 - C10	µg/L							6500	20	<20	<20
	TRH >C10 - C16	µg/L								100	<100	<50
	TRH >C16 - C34	µg/L								100	<100	<100
	TRH >C34 - C40	µg/L								100	<100	<100
	TRH >C10 - C40 (Sum of total)	µg/L								100	<100	<100
	TRH >C6 - C10 less BTEX (F1)	µg/L								20	<20	<20
	TRH >C10 - C16 less Naphthalene (F2)	µg/L								100	<100	<50
TPH - NEPM 1999 Fractions	TPH C6 - C9	µg/L								20	<20	<20
	TPH C10 - C14	µg/L								50	<50	<50
	TPH C15 - C28	µg/L								100	<100	<100
	TPH C29-C36	µg/L								50	<50	<100
	TPH C10 - C36 (Sum of total)	µg/L								50	<50	<100
BTEXN	Benzene	µg/L		950		1 d	1 e		5400	1	<1	<1
	Ethylbenzene	µg/L	80		3					1	<1	<1
	Naphthalene	µg/L		16						1	<2	<1
	Toluene	µg/L	180		25					1	<1	<1
	Total BTEX	µg/L								1	<1	-
	Xylene (m & p)	µg/L								1	<1	<2
	Xylene (o)	µg/L		350						1	<1	<1
	Xylene Total	µg/L			20					1	<1	<3
PAHs	Benzo(b+j)fluoranthene	µg/L								1		<1
	2-chloronaphthalene	µg/L								2	<2	-
	2-methylnaphthalene	µg/L								2	<2	-
	3-methylcholanthrene	µg/L								2	<2	-
	7,12-dimethylbenz(a)anthracene	µg/L								2	<2	-
	Acenaphthene	µg/L								1	<2	<1
	Acenaphthylene	µg/L								1	<2	<1
	Anthracene	µg/L	0.1							1	<2	<1
	Benz(a)anthracene	µg/L								1	<2	<1
	Benzo(a) pyrene	µg/L	0.1			0.01 d	0.01 e			0.5	<2	<1
	Benzo(b+j) & Benzo(k)fluoranthene	µg/L								4	<4	-
	Benzo(g,h,i)perylene	µg/L								1	<2	<1
	Benzo(k)fluoranthene	µg/L								1	-	<1
	Chrysene	µg/L								1	<2	<1
	Dibenz(a,h)anthracene	µg/L								1	<2	<1
	Fluoranthene	µg/L	1							1	<2	<1
	Fluorene	µg/L								1	<2	<1
	Indeno(1,2,3-c,d)pyrene	µg/L								1	<2	<1
	Phenanthrene	µg/L	0.6							1	<2	<1
	Pyrene	µg/L								1	<2	<1
	PAHs (Sum of total)	µg/L								0.5	<2	<1
Monocyclic Aromatic Hydrocarbons (MAHs)	1,2,4-trimethylbenzene	µg/L								1	<1	-
	1,3,5-trimethylbenzene	µg/L								1	<1	-
	Isopropylbenzene	µg/L	30							1	<1	-
	n-butylbenzene	µg/L								1	<1	-
	n-propylbenzene	µg/L								1	<1	-
	p-Isopropyltoluene	µg/L								1	<1	-
	sec-butylbenzene	µg/L								1	<1	-
	tert-butylbenzene	µg/L								1	<1	-
Chlorinated Hydrocarbons	1,1,1,2-tetrachloroethane	µg/L								1	<1	-
	1,1,1-trichloroethane	µg/L	270							1	<1	-
	1,1,2,2-tetrachloroethane	µg/L	400							1	<1	-
	1,1,2-trichloroethane	µg/L		6500						1	<1	-
	1,1-dichloroethane	µg/L								1	<1	-
	1,1-dichloroethene	µg/L	700			30 d	30 e			1	<1	-
	1,2,3-trichloropropane	µg/L								1	<1	-
	1,2-dibromo-3-chloropropane	µg/L								1	<1	-
	1,2-dichloroethane	µg/L	1900			3 d	3 e			1	<1	-
	1,2-dichloropropane	µg/L	900							1	<1	-
	1,3-dichloropropane	µg/L	1100							1	<1	-
	2,2-dichloropropane	µg/L								1	<1	-
	Bromochloromethane	µg/L								1	<1	-
	Bromodichloromethane	µg/L								1	<1	-
	Bromoform	µg/L								1	<1	-
	Carbon tetrachloride	µg/L	240			3 d	3 e			1	<1	-
	Chlorodibromomethane	µg/L								1	<1	-
	Chloroethane	µg/L								10	<10	-
	Chloroform	µg/L	370			250000 d	250000 e			1	<1	-
	Chloromethane	µg/L								10	<10	-
	cis-1,2-dichloroethene	µg/L								1	<1	-
	cis-1,3-dichloropropene	µg/L								2	<2	-
	Dibromomethane	µg/L								1	<1	-
	Dichloromethane	µg/L	4000			4 d	4 e			2	<2	-
	Hexachlorobutadiene	µg/L				0.7 d	0.7 e			0.5	<0.5	-
	Trichloroethene (TCE)	µg/L	330							1	<1	-
	Tetrachloroethene (PCE)	µg/L	70			50 d	50 e			1	<1	-
	trans-1,2-dichloroethene	µg/L								1	<1	-
	trans-1,3-dichloropropene	µg/L								2	<2	-
	Vinyl chloride	µg/L	100			0.3 d	0.3 e			0.2	<0.2	-
	Trichlorobenzenes (Sum)	µg/L								1	<1	-
Volatile Organic Compounds (VOCs)	1,1-dichloropropene	µg/L								1	<1	-
	1,3-Dichloropropylene (cis & trans)	µg/L								2	<2	-
	1,2-butylacetate	µg/L								20	<20	-
	Acrylamide	µg/L				0.2 d	0.2 e			0.2	<0.2	-
	cis-1,4-Dichloro-2-butene	µg/L								1	<1	-
	Pentachloroethane	µg/L	80							1	<1	-
	Styrene	µg/L			4					1	<1	-
	Trihalomethanes	µg/L								1	<1	-
	trans-1,4-Dichloro-2-butene	µg/L								1	<1	-
Semi Volatile Organic Compounds (SVOCs)	3- & 4-Methylphenol	µg/L								2	<2	-
	2-(acetylamino) fluorene	µg/L								2	<2	-
	Formaldehyde	µg/L				500 d	500 e			100	<100	-
	Piperonyl butoxide	µg/L				600 d	600 e			0.5	<0.5	-
Halogenated Benzenes	1,2,3-trichlorobenzene	µg/L		10						1	<1	-
	1,2,4-trichlorobenzene	µg/L		170						1	<1	-
	1,2-dichlorobenzene	µg/L		160	1					1	<1	-
	1,3-dichlorobenzene	µg/L		260	20					1	<1	-
	1,4-dichlorobenzene	µg/L		60	0.3					0.1	<0.1	-
	2-chlorotoluene	µg/L								1	<1	-
	4-chlorotoluene	µg/L								1	<1	-
	Bromobenzene	µg/L								1	<1	-
	Chlorobenzene	µg/L	55		10					1	<1	-
	Hexachlorobenzene	µg/L	0.05							0.5	<0.5	-
Halogenated Hydrocarbons	1,2-dibromoethane	µg/L				1 d	1 e			1	<1	-
	Bromomethane	µg/L								10	<10	-
	Dichlorodifluoromethane	µg/L								10	<10	-
	Iodomethane	µg/L								1	<1	-
	Trichlorofluoromethane	µg/L								10	<10	-
Phenols	2,4,5-trichlorophenol	µg/L	0.5							1	<2	-
	2,4,6-trichlorophenol	µg/L		20	2					1	<2	-
	2,4-dichlorophenol	µg/L		160	0.3					1	<2	-
	2,4-dimethylphenol	µg/L	2							1	<2	-
	2,6-dichlorophenol	µg/L	34							1	<2	-
	2-chlorophenol	µg/L		490	0.1					1	<2	-
	2-methylphenol	µg/L								1	<2	-
	2-nitrophenol	µg/L	2							1	<2	-

									Lab Report	EM2010819	728543	
									Sample ID	MW001_200625	QC01_200625	
									Location Code	MW001	MW001	
									Sample Type	Normal	Inter-lab_D	
									Date	25/06/2020	25/06/2020	
			Water-dependent Ecosystems and Species		Water-based Recreation (Primary Contact)		Agriculture and Irrigation (Stock	Buildings and Structures	Vapour Intrusion			
			ANZG (2018) Freshwater (unknown reliability) toxicant	ANZG (2018) Freshwater 95% toxicant DGVs	ADWG 2018 Aesthetic	NHMRC 2008 Recreational Water	ANZECC 2000 Stock Watering	AS2159-2009 Buildings & Structures	CRC Care HSL-D, 8m+ GW in Sand Soils			
Chem_Group	**ChemName**	**Units**								**EQL**		
-------	4-chloro-3-methylphenol	µg/L								1	<2	-
	Pentachlorophenol	µg/L		10		10 d	10 e			2	<4	-
	Phenol	µg/L		320						1	<2	-
Phthalates	Bis(2-ethylhexyl) phthalate	µg/L	1			10 d	10 e			10	<10	-
	Butyl benzyl phthalate	µg/L								2	<2	-
	Diethylphthalate	µg/L		1000						2	<2	-
	Dimethyl phthalate	µg/L		3700						2	<2	-
	Di-n-butyl phthalate	µg/L		26						2	<2	-
	Di-n-octyl phthalate	µg/L								2	<2	-
	Phthalates (Sum of Total)	µg/L								2	<2	-
Solvents	Methyl Ethyl Ketone	µg/L								10	<10	-
	2-hexanone (MBK)	µg/L								10	<10	-
	4-Methyl-2-pentanone	µg/L								10	<10	-
	Carbon disulfide	µg/L	20							1	<1	-
	Ethyl acetate	µg/L								20	<20	-
	MTBE	µg/L								1	<1	-
	Vinyl acetate	µg/L								10	<10	-
Organochlorine Pesticides (OCPs)	4,4-DDE	µg/L	0.03							0.5	<0.5	-
	a-BHC	µg/L								0.5	<0.5	-
	Aldrin	µg/L	0.001							0.5	<0.5	-
	Aldrin + Dieldrin	µg/L				0.3 d	0.3 e			0.5	<0.5	-
	b-BHC	µg/L								0.5	<0.5	-
	Chlordane	µg/L		0.08		2 d	2 e			0.5	<0.5	-
	Chlordane (cis)	µg/L								0.5	<0.5	-
	Chlordane (trans)	µg/L								0.5	<0.5	-
	d-BHC	µg/L								0.5	<0.5	-
	DDD	µg/L								0.5	<0.5	-
	DDT	µg/L		0.01		9 d	9 e			2	<2	-
	DDT+DDE+DDD	µg/L								0.5	<0.5	-
	Dieldrin	µg/L	0.01							0.5	<0.5	-
	Endosulfan I	µg/L								0.5	<0.5	-
	Endosulfan II	µg/L								0.5	<0.5	-
	Endosulfan sulphate	µg/L								0.5	<0.5	-
	Endrin	µg/L		0.02						0.5	<0.5	-
	Endrin aldehyde	µg/L								0.5	<0.5	-
	Endrin ketone	µg/L								0.5	<0.5	-
	g-BHC (Lindane)	µg/L		0.2		10 d	10 e			0.5	<0.5	-
	Heptachlor	µg/L		0.09		0.3 d	0.3 e			0.5	<0.5	-
	Heptachlor epoxide	µg/L								0.5	<0.5	-
	Methoxychlor	µg/L	0.005			300 d	300 e			2	<2	-
Organophosphorous Pesticides (OPPs)	Azinophos methyl	µg/L		0.02		3 d	3 e			0.5	<0.5	-
	Bromophos-ethyl	µg/L				10 d	10 e			0.5	<0.5	-
	Carbophenothion	µg/L				0.5 d	0.5 e			0.5	<0.5	-
	Chlorfenvinphos	µg/L				2 d	2 e			0.5	<0.5	-
	Chlorpyrifos	µg/L		0.01		10 d	10 e			0.5	<0.5	-
	Chlorpyrifos-methyl	µg/L								0.5	<0.5	-
	Demeton-S-methyl	µg/L	4							0.5	<0.5	-
	Diazinon	µg/L		0.01		4 d	4 e			0.5	<0.5	-
	Dichlorvos	µg/L				5 d	5 e			0.5	<0.5	-
	Dimethoate	µg/L		0.15		50 d	50 e			0.5	<0.5	-
	Ethion	µg/L				4 d	4 e			0.5	<0.5	-
	Fenamiphos	µg/L				0.3 d	0.3 e			0.5	<0.5	-
	Fenthion	µg/L				7 d	7 e			0.5	<0.5	-
	Glyphosate	µg/L		1200		1000 d	1000 e		10,000	10	<10	-
	Malathion	µg/L		0.05		70 d	70 e			0.5	<0.5	-
	Methyl parathion	µg/L				100 d	100 e			2	<2	-
	Monocrotophos	µg/L				1 d	1 e			2	<2	-
	Parathion	µg/L		0.004		10 d	10 e			2	<2	-
	Pirimphos-ethyl	µg/L				0.5 d	0.5 e			0.5	<0.5	-
	Prothiofos	µg/L								0.5	<0.5	-
Pesticides	3-Hydroxy Carbofuran	µg/L								0.2	<0.2	-
	Aldicarb	µg/L				10				0.2	<0.2	-
	Bendiocarb	µg/L								0.2	<0.2	-
	Bifenthrin	µg/L								0.5	<0.5	-
	Bioresmethrin	µg/L				100 d	100 e			0.5	<0.5	-
	Carbaryl	µg/L							300	0.2	<0.2	-
	Carbofuran	µg/L		1.2		100				0.2	<0.2	-
	Cyhalothrin/Karate	µg/L								0.5	<0.5	-
	Cypermethrins(total)	µg/L								0.5	<0.5	-
	Permethrin	µg/L				100 d	100 e			0.5	<0.5	-
	Fenvalerate & Esfenvalerate	µg/L								0.5	<0.5	-
	Tetramethrin	µg/L								0.5	<0.5	-
	Methomyl	µg/L		3.5		300				0.2	<0.2	-
	Oxamyl	µg/L				1000				0.2	<0.2	-
	Thiodicarb	µg/L								0.2	<0.2	-
	Baythroid	µg/L								0.5	<0.5	-
	Methiocarb	µg/L				50				0.2	<0.2	-
	Di(2-ethylhexyl)adipate	µg/L								2	<2	-
	PCBs (Sum of total)	µg/L								1	<1	-
Synthetic Pyrethroids by GCMS	Tau-fluvalinate	µg/L								0.5	<0.5	-
	Allethrin	µg/L								0.5	<0.5	-
	Deltamethrin & Tralomethrin	µg/L								0.5	<0.5	-
	Phenothrin	µg/L								0.5	<0.5	-
	Transfluthrin	µg/L								0.5	<0.5	-
Herbicides	2,4,5-Trichlorophenoxy Acetic Acid	µg/L		36		100 d	100 e			10	<10	-
	2,4,5-TP (Silvex)	µg/L				10 d	10 e			10	<10	-
	2,4-Dichlorprop	µg/L								10	<10	-
	2,6-D	µg/L								10	<10	-
	2,4,6-Trichlorophenoxy-acetic acid	µg/L								10	<10	-
	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	µg/L								10	<10	-
	4-Chlorophenoxy acetic acid	µg/L								10	<10	-
	Ametryn	µg/L				70 d	70 e			2	-	<2
	Atraton	µg/L								2	-	<2
	Atrazine	µg/L		13		20 d	20 e			2	-	<2
	Clopyralid	µg/L				2000 d	2000 e			10	<10	-
	Dicamba	µg/L				100 d	100 e			10	<10	-
	Fluroxypyr	µg/L								10	<10	-
	Hedonal	µg/L		280		30 d	30 e			10	<10	-
	2-Methyl-4-chlorophenoxyacetic acid	µg/L	1.4							10	<10	-
	2-Methyl-4-Chlorophenoxy Butanoic Acid	µg/L								10	<10	-
	Mecoprop	µg/L								10	<10	-
	Picloram	µg/L				300 d	300 e			10	<10	-
	Prometon	µg/L								2	-	<2
	Prometryn	µg/L								2	-	<2
	Propazine	µg/L				50 d	50 e			2	-	<2
	Simazine	µg/L		3.2		20 d	20 e			2	-	<2
	Simetryn	µg/L								2	-	<2
	Terbutryn	µg/L				40 d	40 e			2	-	<2
	Terbutylazine	µg/L								2	-	<2
	Triclopyr	µg/L				20 d	20 e			10	<10	-

Notes: a - 99% species protection guideline values adopted to account for bioaccumulation potential
b - Based on NIWA 2013 Nitrate toxicity effects on freshwater species
c - Based on SEPP 2018 guideline values
d - ADWG 2018 have been adopted to account for exposure pathways other than ingestion
e - ADWG 2018 have been adopted for inorganics
Cells greyed out indicate results where the LOR is greater than the adopted guideline values

		Lab Report	EM2010198		RPD	EM2010198	726502	RPD	EM2010590		RPD	EM2010590	726669	RPD
		Sample ID	TP02_0.2	QA101_200616		TP02_0.2	QA201_200616		STP05_0.2	QA101_200617		STP05_0.2	QA201_200617	
		Matrix	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Date	16/06/2020	16/06/2020		16/06/2020	16/06/2020		17/06/2020	17/06/2020		17/06/2020	17/06/2020	
	Unit	EQL												
Metals														
Arsenic	mg/kg	2	**5**	<5	0	**5**	**5.8**	15	<5	<5	0	<5	**4.3**	0
Beryllium	mg/kg	1	<1	<1	0	<1	-	-	-	-	-	-	-	-
Boron	mg/kg	10	<50	<50	0	<50	**36**	0	-	-	-	-	-	-
Cadmium	mg/kg	0.4	<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0
Chromium (hexavalent)	mg/kg	0.5	<0.5	<0.5	0	<0.5	-	-	<0.5	<0.5	0	<0.5	<1	0
Chromium (III+VI)	mg/kg	2	**53**	**51**	4	**53**	**65**	20	-	-	-	-	**70**	-
Cobalt	mg/kg	2	**20**	**15**	29	**20**	**21**	5	-	-	-	-	-	-
Copper	mg/kg	5	**20**	**18**	11	**20**	**22**	10	**20**	**18**	11	**20**	**23**	14
Lead	mg/kg	5	<5	<5	0	<5	**18**	**113**	<5	<5	0	<5	**5.6**	11
Manganese	mg/kg	5	**430**	**288**	**40**	**430**	**420**	2	-	-	-	-	-	-
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	<0.1	0
Molybdenum	mg/kg	2	<2	<2	0	<2	<5	0	<2	<2	0	<2	<5	0
Nickel	mg/kg	2	**64**	**56**	13	**64**	**73**	13	**83**	**63**	27	**83**	**76**	9
Selenium	mg/kg	2	<5	<5	0	<5	<2	0	<5	<5	0	<5	<2	0
Silver	mg/kg	0.2	<2	<2	0	<2	<0.2	0	<2	<2	0	<2	<0.2	0
Tin	mg/kg	5	<5	<5	0	<5	<10	0	<5	<5	0	<5	<10	0
Zinc	mg/kg	5	**26**	**22**	17	**26**	**34**	27	**28**	**26**	7	**28**	**40**	35
Organochlorine Pesticides (OCPs)														
4,4-DDE	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
a-BHC	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Aldrin	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Aldrin + Dieldrin	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
b-BHC	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Chlordane	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.1	0	<0.03	<0.03	0	<0.03	<0.1	0
Chlordane (cis)	mg/kg	0.03	<0.05	<0.05	0	<0.05	-	-	<0.03	<0.03	0	<0.03	-	-
Chlordane (trans)	mg/kg	0.03	<0.05	<0.05	0	<0.05	-	-	<0.03	<0.03	0	<0.03	-	-
d-BHC	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
DDD	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
DDT	mg/kg	0.05	<0.2	<0.2	0	<0.2	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
DDT+DDE+DDD	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Dieldrin	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endosulfan	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Endosulfan I	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endosulfan II	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endosulfan sulphate	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endrin	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endrin aldehyde	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Endrin ketone	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	-	-	-	-	<0.05	-
g-BHC (Lindane)	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Heptachlor	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Heptachlor epoxide	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Methoxychlor	mg/kg	0.03	<0.2	<0.2	0	<0.2	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Toxaphene	mg/kg	1	<2	-	-	<2	<1	0	-	-	-	-	<1	-
TRH - NEPM 2013 Fractions														
TRH >C6 - C10	mg/kg	10	-	-	-	-	-	-	<10	<10	0	<10	<20	0
TRH >C10 - C16	mg/kg	50	-	-	-	-	-	-	<50	<50	0	<50	<50	0
TRH >C16 - C34	mg/kg	100	-	-	-	-	-	-	<100	<100	0	<100	<100	0
TRH >C34 - C40	mg/kg	100	-	-	-	-	-	-	<100	<100	0	<100	<100	0
TRH >C10 - C40 (Sum of total)	mg/kg	50	-	-	-	-	-	-	<50	<50	0	<50	<100	0
TRH >C6 - C10 less BTEX (F1)	mg/kg	10	-	-	-	-	-	-	<10	<10	0	<10	<20	0
TRH >C10 - C16 less Naphthalene (F2)	mg/kg	50	-	-	-	-	-	-	<50	<50	0	<50	<50	0
TPH - NEPM 1999 Fractions														
TPH C6 - C9	mg/kg	10	-	-	-	-	-	-	<10	<10	0	<10	<20	0
TPH C10 - C14	mg/kg	20	-	-	-	-	-	-	<50	<50	0	<50	<20	0
TPH C15 - C28	mg/kg	50	-	-	-	-	-	-	<100	<100	0	<100	<50	0
TPH C29-C36	mg/kg	50	-	-	-	-	-	-	<100	<100	0	<100	<50	0
TPH C10 - C36 (Sum of total)	mg/kg	50	-	-	-	-	-	-	<50	<50	0	<50	<50	0
BTEXN														
Benzene	mg/kg	0.1	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.1	0
Ethylbenzene	mg/kg	0.1	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.1	0
Naphthalene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Toluene	mg/kg	0.1	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.1	0
Xylene (m & p)	mg/kg	0.2	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.2	0
Xylene (o)	mg/kg	0.1	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.1	0
Xylene Total	mg/kg	0.3	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.3	0
PAHs														
Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Anthracene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Benz(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a) pyrene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(b+j) & Benzo(k)fluoranthene	mg/kg	1	-	-	-	-	-	-	<1.0	<1.0	0	<1.0	-	-
Benzo(g,h,i)perylene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Chrysene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Dibenz(a,h)anthracene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Fluorene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Pyrene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0

		Lab Report	EM2010198		RPD	EM2010198	726502	RPD	EM2010590		RPD	EM2010590	726669	RPD
		Sample ID	TP02_0.2	QA101_200616		TP02_0.2	QA201_200616		STP05_0.2	QA101_200617		STP05_0.2	QA201_200617	
		Matrix	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Date	16/06/2020	16/06/2020		16/06/2020	16/06/2020		17/06/2020	17/06/2020		17/06/2020	17/06/2020	
	Unit	EQL												
Chlorinated Hydrocarbons														
1,1,1,2-tetrachloroethane	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
1,1,1-trichloroethane	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
1,1,2,2-tetrachloroethane	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
1,1,2-trichloroethane	mg/kg	0.04	-	-	-	-	-	-	<0.04	<0.04	0	<0.04	<0.5	0
1,1-dichloroethene	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
1,2-dichloroethane	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Carbon tetrachloride	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
Chloroform	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
cis-1,2-dichloroethene	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
Dichloromethane	mg/kg	0.4	-	-	-	-	-	-	<0.4	<0.4	0	<0.4	<0.5	0
Hexachlorobutadiene	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Trichloroethene (TCE)	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Tetrachloroethene (PCE)	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
trans-1,2-dichloroethene	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Vinyl chloride	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Volatile Organic Compounds (VOCs)														
Total Chlorinated Hydrocarbons VIC EPA	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
Total Other Chlorinated Hydrocarbons VIC EPA	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
Styrene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Semi Volatile Organic Compounds (SVOCs)														
3- & 4-Methylphenol	mg/kg	0.4	-	-	-	-	-	-	<1	<1	0	<1	<0.4	0
Non-Halogenated Phenols														
Dinoseb	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	<20	0
Halogenated Benzenes														
1,2,4-trichlorobenzene	mg/kg	0.01	-	-	-	-	-	-	<0.01	<0.01	0	<0.01	<0.5	0
1,2-dichlorobenzene	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
1,4-dichlorobenzene	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Chlorobenzene	mg/kg	0.02	-	-	-	-	-	-	<0.02	<0.02	0	<0.02	<0.5	0
Hexachlorobenzene	mg/kg	0.03	<0.05	<0.05	0	<0.05	<0.05	0	<0.03	<0.03	0	<0.03	<0.05	0
Phenols														
2,3,5,6-Tetrachlorophenol	mg/kg	0.03	-	-	-	-	-	-	<0.03	<0.03	0	<0.03	-	-
2,4,5-trichlorophenol	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<1	0
2,4,6-trichlorophenol	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<1	0
2,4-dichlorophenol	mg/kg	0.03	-	-	-	-	-	-	<0.03	<0.03	0	<0.03	<0.5	0
2,4-dimethylphenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
2,4-dinitrophenol	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	<5	0
2,6-dichlorophenol	mg/kg	0.03	-	-	-	-	-	-	<0.03	<0.03	0	<0.03	<0.5	0
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	-	-
2-chlorophenol	mg/kg	0.03	-	-	-	-	-	-	<0.03	<0.03	0	<0.03	<0.5	0
2-methylphenol	mg/kg	0.2	-	-	-	-	-	-	<1	<1	0	<1	<0.2	0
2-nitrophenol	mg/kg	1	-	-	-	-	-	-	<1	<1	0	<1	<1	0
4,6-Dinitro-2-methylphenol	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	<5	0
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	<20	0
4-chloro-3-methylphenol	mg/kg	0.03	-	-	-	-	-	-	<0.03	<0.03	0	<0.03	<1	0
4-nitrophenol	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	<5	0
Pentachlorophenol	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<1	0
Phenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
Organophosphorous Pesticides (OPPs)														
Azinophos methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Bromophos-ethyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Carbophenothion	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Chlorfenvinphos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Chlorpyrifos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Chlorpyrifos-methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Demeton-S-methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Diazinon	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Dichlorvos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Ethion	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Fenamiphos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Fenthion	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Malathion	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	-	-	-	-	-	-
Monocrotophos	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	-	-	-	-	-	-
Parathion	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	-	-	-	-	-	-
Pirimphos-ethyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-
Prothiofos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	-	-	-	-	-	-

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

****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 80 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))**

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

Any methods in the row header relate to those used in the primary laboratory

		Lab Report Number	EM2010819	728543	
		Field ID	MW001_200625	QC01_200625	
		Matrix Type	Water	Water	
		Date	25/06/2020	25/06/2020	RPD
	Unit	EQL			
Metals					
Arsenic (filtered)	µg/L	1	**2**	**1**	67
Cadmium (filtered)	µg/L	0.1	<0.1	<0.2	0
Chromium (III+VI) (filtered)	µg/L	1	**6**	**4**	40
Copper (filtered)	µg/L	1	**4**	**3**	29
Lead (filtered)	µg/L	1	<1	<1	0
Mercury (filtered)	µg/L	0.1	<0.1	<0.1	0
Nickel (filtered)	µg/L	1	**16**	**15**	6
Zinc (filtered)	µg/L	5	**34**	**28**	19
TRH - NEPM 2013 Fractions					
TRH >C6 - C10	µg/L	20	<20	<20	0
TRH >C10 - C16	µg/L	50	<100	<50	0
TRH >C16 - C34	µg/L	100	<100	<100	0
TRH >C34 - C40	µg/L	100	<100	<100	0
TRH >C10 - C40 (Sum of total)	µg/L	100	<100	<100	0
TRH >C6 - C10 less BTEX (F1)	µg/L	20	<20	<20	0
TRH >C10 - C16 less Naphthalene (F2)	µg/L	50	<100	<50	0
TPH - NEPM 1999 Fractions					
TPH C6 - C9	µg/L	20	<20	<20	0
TPH C10 - C14	µg/L	50	<50	<50	0
TPH C15 - C28	µg/L	100	<100	<100	0
TPH C29-C36	µg/L	50	<50	<100	0
TPH C10 - C36 (Sum of total)	µg/L	50	<50	<100	0
BTEXN					
Benzene	µg/L	1	<1	<1	0
Ethylbenzene	µg/L	1	<1	<1	0
Naphthalene	µg/L	1	<2	<1	0
Toluene	µg/L	1	<1	<1	0
Total BTEX	ug/L	1	<1	-	-
Xylene (m & p)	µg/L	1	<1	<2	0
Xylene (o)	µg/L	1	<1	<1	0
Xylene Total	µg/L	1	<1	<3	0
PAHs					
Acenaphthene	µg/L	1	<2	<1	0
Acenaphthylene	µg/L	1	<2	<1	0
Anthracene	µg/L	1	<2	<1	0
Benz(a)anthracene	µg/L	1	<2	<1	0
Benzo(a) pyrene	µg/L	1	<2	<1	0
Benzo(g,h,i)perylene	µg/L	1	<2	<1	0
Benzo(k)fluoranthene	µg/L	1	-	<1	-
Chrysene	µg/L	1	<2	<1	0
Dibenz(a,h)anthracene	µg/L	1	<2	<1	0
Fluoranthene	µg/L	1	<2	<1	0
Fluorene	µg/L	1	<2	<1	0
Indeno(1,2,3-c,d)pyrene	µg/L	1	<2	<1	0
Phenanthrene	µg/L	1	<2	<1	0
Pyrene	µg/L	1	<2	<1	0
PAHs (Sum of total)	µg/L	1	<2	<1	0

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

****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 80 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))**

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

Lab Report Number			EM2010590		EM2010819	
Field ID			RB_200617	RB_200618	FB_200625	RB_200625
Matrix Type			Water	Water	Water	Water
Date			17/06/2020	18/06/2020	25/06/2020	25/06/2020
Sample Type			Rinsate	Rinsate	Field_B	Rinsate
	Unit	EQL				
Metals						
Aluminium	µg/L	10	-	-	-	<10
Arsenic	µg/L	1	<1	<1	-	<1
Barium	µg/L	1	-	-	-	<1
Beryllium	µg/L	1	-	-	-	<1
Boron	µg/L	50	-	-	-	<50
Cadmium	µg/L	0.1	<0.1	<0.1	-	<0.1
Chromium (hexavalent)	µg/L	10	-	-	-	<10
Chromium (III+VI)	µg/L	1	<1	<1	-	<1
Cobalt	µg/L	1	-	-	-	<1
Copper	µg/L	1	<1	<1	-	<1
Lead	µg/L	1	<1	<1	-	<1
Manganese	µg/L	1	-	-	-	<1
Mercury	µg/L	0.1	<0.1	<0.1	-	<0.1
Molybdenum	µg/L	1	-	-	-	<1
Nickel	µg/L	1	<1	<1	-	<1
Selenium	µg/L	10	-	-	-	<10
Silver	µg/L	1	-	-	-	<1
Tin	µg/L	1	-	-	-	<1
Zinc	µg/L	5	<5	<5	-	<5
TRH - NEPM 2013 Fractions						
TRH >C6 - C10	µg/L	20	<20	<20	<20	<20
TRH >C10 - C16	µg/L	100	<100	<100	-	<100
TRH >C16 - C34	µg/L	100	<100	<100	-	<100
TRH >C34 - C40	µg/L	100	<100	<100	-	<100
TRH >C10 - C40 (Sum of total)	µg/L	100	<100	<100	-	<100
TRH >C6 - C10 less BTEX (F1)	µg/L	20	<20	<20	<20	<20
TRH >C10 - C16 less Naphthalene (F2)	µg/L	100	<100	<100	-	<100
TPH - NEPM 1999 Fractions						
TPH C6 - C9	µg/L	20	<20	<20	<20	<20
TPH C10 - C14	µg/L	50	<50	<50	-	<50
TPH C15 - C28	µg/L	100	<100	<100	-	<100
TPH C29-C36	µg/L	50	<50	<50	-	<50
TPH C10 - C36 (Sum of total)	µg/L	50	<50	<50	-	<50
BTEXN						
Benzene	µg/L	1	<1	<1	<1	<1
Ethylbenzene	µg/L	1	<2	<2	<2	<1
Naphthalene	µg/L	1	<1.0	<1.0	<5	<1.0
Toluene	µg/L	1	<2	<2	<2	<1
Total BTEX	µg/L	1	<1	<1	<1	<1
Xylene (m & p)	µg/L	1	<2	<2	<2	<1
Xylene (o)	µg/L	1	<2	<2	<2	<1
Xylene Total	µg/L	1	<2	<2	<2	<1
PAHs						
Benzo[b+j]fluoranthene	µg/L	1	<1.0	<1.0	-	<1.0
Benzo(a)pyrene TEQ calc (zero)	µg/L	0.5	<0.5	<0.5	-	<0.5
Acenaphthene	µg/L	1	<1.0	<1.0	-	<1.0
Acenaphthylene	µg/L	1	<1.0	<1.0	-	<1.0
Anthracene	µg/L	1	<1.0	<1.0	-	<1.0
Benz(a)anthracene	µg/L	1	<1.0	<1.0	-	<1.0
Benzo(a) pyrene	µg/L	0.5	<0.5	<0.5	-	<0.5
Benzo(g,h,i)perylene	µg/L	1	<1.0	<1.0	-	<1.0
Benzo(k)fluoranthene	µg/L	1	<1.0	<1.0	-	<1.0
Chrysene	µg/L	1	<1.0	<1.0	-	<1.0
Dibenz(a,h)anthracene	µg/L	1	<1.0	<1.0	-	<1.0
Fluoranthene	µg/L	1	<1.0	<1.0	-	<1.0
Fluorene	µg/L	1	<1.0	<1.0	-	<1.0
Indeno(1,2,3-c,d)pyrene	µg/L	1	<1.0	<1.0	-	<1.0
Phenanthrene	µg/L	1	<1.0	<1.0	-	<1.0
Pyrene	µg/L	1	<1.0	<1.0	-	<1.0
PAHs (Sum of total)	µg/L	0.5	<0.5	<0.5	-	<0.5

Lab Report Number			EM2010590
Field ID			TB_200619
Matrix Type			Soil
Date			19/06/2020
Sample Type			Trip_B
	Unit	EQL	
TRH - NEPM 2013 Fractions			
TRH >C6 - C10	mg/kg	10	<10
TRH >C6 - C10 less BTEX (F1)	mg/kg	10	<10
TPH - NEPM 1999 Fractions			
TPH C6 - C9	mg/kg	10	<10
BTEXN			
Benzene	mg/kg	0.2	<0.2
Ethylbenzene	mg/kg	0.5	<0.5
Naphthalene	mg/kg	1	<1
Toluene	mg/kg	0.5	<0.5
Total BTEX	mg/kg	0.2	<0.2
Xylene (m & p)	mg/kg	0.5	<0.5
Xylene (o)	mg/kg	0.5	<0.5
Xylene Total	mg/kg	0.5	<0.5

Appendix K. Cultural Heritage Due Diligence Assessment