Detailed Site Investigation

Brunslea Park, Forest Hill, NSW

Prepared for Wakefield Ashurst Developments Pty Limited c/- Yarraman Developments Pty Limited
November 2021

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Detailed Site Investigation

Brunslea Park, Forest Hill, NSW

Report Number

J200300 RP1

Client

Wakefield Ashurst Developments Pty Limited (Wakefield Ashurst), c/- Yarraman Developments Pty Limited

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Executive Summary

EMM Consulting Pty Limited (EMM) was engaged by Wakefield Ashurst Developments Pty Limited (Wakefield Ashurst), c/- Yarraman Developments Pty Limited (Yarraman) to undertake a detailed site investigation (DSI) at a property located in Brunslea Park, Forest Hill, NSW (the Site). The Site comprises four lots, occupying approximately 164 hectares (ha). The Site is located to the north-west and south of the existing Brunslea Park residential area, approximately 12 kilometres (km) south-east of Wagga Wagga city centre.

The Site comprises part of Lot 2 in deposited plan (DP) 1262040, Lot 1 in DP 1220149, Lot 2 in DP 1077748, and Lot 1401 in DP 1262802. The Site is currently zoned RU1 – Primary Production in the Wagga Wagga Local Environmental Plan (LEP) 2010.

EMM understands that Wakefield Ashurst intends to develop the Site for residential, industrial and recreational purposes under future development applications (DA). To support the proposed future development, a Planning Proposal is required, including a report that demonstrates the Site is suitable, or can be made suitable, for residential land use.

The Site is located approximately 1 km to the west of RAAF Base Wagga, where the former use of aqueous film forming foams (AFFF) has resulted in per- and polyfluoroalkyl substances (PFAS) contamination. EMM undertook preliminary investigations, including a historical review and review of previous investigations undertaken by others at RAAF Base Wagga. The preliminary investigations indicated that activities at RAAF Base Wagga have resulted in PFAS impacts in the surrounding area, including soil, groundwater, sediment and surface water. Consequently, potentially complete exposure scenarios were identified at the Site between Site users, future residents, terrestrial and aquatic ecology and impacted surface water, sediments, soils and groundwater (in the north-western portion of the Site only, , where regional geology may allow connectivity between surface water and groundwater).

As a result, detailed investigations were required to assess potentially complete source-pathway-receptor exposure scenarios at the Site in the context of residential land use.

This DSI comprised:

- soil sampling from 24 sampling locations, to approximately 3 metres below ground level (m bgl);
- groundwater sampling from 6 locations, including 4 wells installed to target shallow groundwater in the upper Cowra Formation and 2 wells installed to target the deeper aquifer in the Lachlan Formation. These wells were installed at the north-western Site boundary to assess connectivity between surface water and groundwater, as indicated by the Defence DSI. Two groundwater monitoring wells installed at the eastern (up hydraulic gradient) boundary of the Site were dry at 15 m bgl, confirming limited migration of groundwater in the shallow geology;
- surface water sampling from 13 locations, including farm dams and surface water drainage lines throughout the Site; and
- sediment sampling from 14 locations, concurrent with the surface water sampling locations (with the exception of one location which was dry at the time of sampling).

The DSI did not identify contamination (PFAS or conventional contamination) in soil, sediment, groundwater and surface water at concentrations greater than the adopted site assessment criteria (SAC) for human health, with the following exceptions:

- two samples of surface water with concentrations of perfluorooctane sulfonate (PFOS) + perfluorohexane sulfonate (PFHxS) greater than the SAC for drinking water. Consumption of surface water within the Site under a residential land use is considered an unlikely exposure pathway, as residences will be connected to a town water supply. Additionally, use of contaminated water for irrigation of home grown produce and subsequent consumption of that produce, is a potential indirect pathway for future residents, however the low concentrations and limited extent of contamination reported as well as the indirect nature of potential exposure is considered to make this an unlikely exposure scenario. Incidental ingestion may occur during development of the Site, with sensitive receptors identified as construction workers; and

- one sediment sample with a concentration of PFOS greater than the SAC for residential soil was reported within the Site. Given the limited extent of contamination it is considered that a compete exposure pathway with future residents is unlikely. Potential exposure during the construction phase is possible.

Concentrations greater than the ecological SAC were reported in sediment, surface water and groundwater as follows:

- PFOS was reported in one sediment sample (plus one sample to the north of the Site) at a concentration greater than the indirect ecological exposure guideline value for soil. This sample also reported a concentration of total recoverable hydrocarbons (TRH) greater than the ecological screening level (ESL). Given the isolated nature of these results, no significant impact on the suitability of the Site for residential land use is anticipated;

- PFOS was reported in one groundwater sample and all surface water samples at concentrations greater than the ecological assessment criteria. The ecological assessment criterion is noted to be very low (lower than the laboratory limit of reporting (LOR) for groundwater) so as to account for potential bioaccumulation. The source of surface water contamination (RAAF Base Wagga) is undergoing management and it is likely that contaminant load will reduce over time. Additionally, the receiving environments (such as Gumly Gumly wetland) are subject to ongoing management under the Defence PMAP. It is also expected that development of the Site will manage the migration of surface water across the Site, reducing opportunities for exposure (for example, using stormwater drains and removing farm dams). As a result, the exceedance of ecological criteria is not considered to affect the overall suitability of the Site for the proposed development; and

- potential terrestrial and aquatic ecological exposure pathways identified in the southern portion of the Site associated with the Gregadoo Creek catchment will require management if this area is retained at the Site as a riparian zone. This area falls within the Defence PMAP surface water management zone and will be subject to ongoing management measures to reduce contaminant load and mitigate exposure risks.

Based on the findings of this DSI, complete or potentially complete source-pathway-receptor linkages were identified for Site users including construction workers (direct contact with surface water and potentially with sediments), terrestrial ecology (surface water and sediments) and aquatic ecology (surface water and groundwater). It is considered that the Site can be made suitable for residential land use, based on the following:

- As noted above, the Defence is actively managing PFAS contamination on the RAAF Base and in downgradient areas through the implementation of the PFAS Management Area Plan (PMAP). This includes groundwater and surface water management zones in areas surrounding the Site. Consequently, it is expected that the mass of contaminants migrating onto the Site in surface water will reduce over time, which would reduce impacts to surface water bodies, soil and sediment on the Site.

- Management of surface water is recommended during the construction phase to minimise direct contact between potentially impacted water and construction workers an reduce the migration of impacted sediment (either entrained in surface water flows or as a result of contaminants settling in bodies of standing water). Following construction, it is anticipated that surface water would be diverted into municipal stormwater drains or dedicated surface water drainage infrastructure, thereby minimising potential contact with future Site users and ecological receptors. If riparian zones are retained, further discussion may be required to understand the implementation of management measures under the Defence PMAP.

- While no contamination greater than the SAC was reported, it is recommended that tip materials identified in the central/southern portion of the Site are removed, and removal and/or validation of underlying soils is completed as the presence of localised contamination in the tip area cannot be precluded at this stage.

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Acronyms

List of Acronyms

Term	Definition
ACM	Asbestos containing material
ACT	Australian Capital Territory
AEC	Area of Environmental Concern
AFFF	Aqueous film-forming foam
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
ARFF	Aviation Rescue Fire Fighting
AS	Australian Standard
ASS	Acid sulfate soils
AST	Aboveground storage tank
CLM Act	Contaminated Land Management Act 1997 (NSW)
CoPC	Contaminants of potential concern
CSM	Conceptual site model
DA	Development application
DEE	Department of the Environment and Energy (Commonwealth)
DP	Deposited Plan
DPIE	Department of Planning, Industry and Environment (NSW)
DQI	Data quality indicators
DQO	Data quality objectives
DSI	Detailed Site Investigation
EMM	EMM Consulting Pty Ltd
EPA	Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
EPL	Environment Protection Licence
FTA	Fire Training Area
HBM	Hazardous building materials
HEPA	Australia and New Zealand Heads of EPA
HHERA	Human Health and Ecological Risk Assessment
HIL	Health investigation level
LEP	Local Environmental Plan
LGA	Local Government Authority
LOR	Limit of reporting

List of Acronyms

Term	Definition
m bgl	Metres below ground level
NEPC	National Environment Protection Council
NEMP	PFAS National Environmental Management Plan
NEPM	National Environmental Protection (Assessment of Site Contamination) Measure, as amended (2013)
NSW	New South Wales
OCP	Organochlorine pesticides
OPP	Organophosphorus pesticides
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PFAS	Per- and polyfluoroalkyl substances
PMAP	PFAS Management Area Plan
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
ppm	Parts per million
PSI	Preliminary Site Investigation
PSP	Preliminary Sampling Program
QA/QC	Quality assurance/quality control
RAAF	Royal Australian Air Force
SAC	Site assessment criteria
SAQP	Sampling analysis and quality control plan
SEAR	Secretary's Environmental Assessment Requirement (NSW)
SEPP 55	State Environmental Planning Policy No 55 – Remediation of Land (NSW)
USCS	United Soil Classification System
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VOCs	Volatile organic compounds
WWTP	Wastewater Treatment Plant

1 Introduction

Wakefield Ashurst Developments Pty Limited (Wakefield Ashurst), c/- Yarraman Developments Pty Limited (Yarraman) engaged EMM Consulting Pty Limited (EMM) to undertake a detailed site investigation (DSI) at a property located in Brunslea Park, Forest Hill, NSW (the Site). The Site comprises four lots, occupying approximately 164 hectares (ha). The Site is located to the north-west and south of the existing Brunslea Park residential area, approximately 12 kilometres (km) south-east of Wagga Wagga city centre. The Site location is shown in Figure 1.1.

The Site comprises part of Lot 2 in deposited plan (DP) 1262040, Lot 1 in DP 1220149, Lot 2 in DP 1077748, and Lot 1401 in DP 1262802. The Site is currently zoned RU1 – Primary Production in the Wagga Wagga Local Environmental Plan (LEP) 2010.

EMM understands that Wakefield Ashurst intends to develop the Site for residential, industrial and recreational purposes. To support this proposed future development, a Planning Proposal is required, including a report that demonstrates the Site is suitable, or can be made suitable, for residential land use.

1.1 Background information

In January 2020, EMM completed a preliminary site investigation (PSI) at the Site, to develop an understanding of potential contamination a that could impact on proposed Planning Proposal and future residential land use at the Site. The PSI included particular consideration of per- and poly-fluoroalkyl substances (PFAS) contamination, due to the documented presence of PFAS contamination on and around the Royal Australian Air Force (RAAF) Base Wagga, located approximately 1 km to the east of the Site.

The PSI included a portion of land to the north of the Site, which is occupied by Gumly Gumly wetlands, and a stormwater channel to the north-east of the Site that connects the wetlands with Elizabeth Avenue to the east. However, for the purposes of rezoning, land below the 1 in 100-year flood line (183.75 m AHD) is not included and therefore has not been assessed as part of this DSI.

The PSI included a review and summary of investigations undertaken by the Department of Defence (Defence) at the RAAF Base and in the surrounding area, including some locations in the vicinity of the Site. Investigations undertaken by Defence, as they relate to the Site, are discussed further in Section 6.

The PSI identified potential sources of contamination on-site and in the surrounding area, including the RAAF Base (fire fighting training areas, landfills, fuel and chemical storage, etc), the NSW Rural Fire Service (RFS) station and Big River Ausply factory on Elizabeth Avenue, stormwater and sewer infrastructure, surface water bodies including farm dams, ephemeral creeks and the Gumly Gumly wetland (located to the north-west of the Site), imported fill materials and agricultural activities. These potential sources or contamination are presented in Figure 3.2.

The findings of the PSI are included in this DSI report.

1.2 Objective

The purpose of the DSI is to assess if contaminant source-pathway-receptor (S-P-R) linkages are complete and would present an unacceptable risk to Site users and/or the environment under the proposed future residential land use. The overall objective of the DSI is to support the Planning Proposal for the Site that are proposed for future residential land use.

Due to the size of the Site there are limitations in the sampling design that can reasonably be implemented. The NSW EPA Sampling Design Guidelines (1995) recommend that for sites greater than 5 ha, the site be sub-divided into smaller investigation areas based on geology, land use, contamination type, etc. As the Site has largely been used for a similar purpose (agriculture), and contaminants of potential concern (CoPC) across the Site, if present, are likely to be consistent, EMM has designed a sampling plan that is primarily judgemental in design and targets proximity to identified potential contaminant sources, rather than providing comprehensive coverage of the entire Site on a grid basis.

This approach is considered sufficient for the purposes of the rezoning application, however, based on the results of this DSI, additional targeted investigations may be necessary in some areas of the Site to support future development applications.

1.3 Regulatory framework

The National Environment Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure, 1999 as amended in 2013 (the ASC NEPM) establishes a nationally consistent approach to the assessment and management of contaminated land in Australia and is given effect by legislation and guidelines in each state and territory. Contaminated land in NSW is primarily dealt with by the NSW EPA and planning authorities (state and local governments).

1.3.1 NSW Contaminated Land Management Act 1997

The NSW *Contaminated Land Management Act 1997* (CLM Act) aims to better promote the management of contaminated land. The objectives of the CLM Act are to establish a process for investigating and (where appropriate) remediating land areas where contamination is considered significant enough to warrant regulation.

The NSW EPA has powers to respond to contamination that is significant enough to warrant regulation. The NSW EPA can direct landowners to investigate or remediate contaminated land and requires landowners to report contamination where particular triggers are met (duty to report). The CLM Act may be triggered if contamination migrates beyond site boundaries.

1.3.2 NSW Protection of the Environment Operations Act 1997

The NSW *Protection of the Environment Operations Act 1997* (POEO Act) is also administered by the NSW EPA. It prohibits any person to cause pollution of waters, land or air and provides penalties for specified offences. The POEO Act enables the NSW Government to set out explicit protection of the environment policies and adopt more innovative approaches to reducing pollution. The POEO Act also requires "scheduled activities" listed at Schedule 1 to the POEO Act to be carried out in accordance with an Environment Protection Licence (EPL).

1.3.3 Environmental Planning and Assessment Act 2000 and State Environmental Planning Policy (SEPP) 55 – Remediation of Land

SEPP 55 – Remediation of Land is a planning instrument under the *Environmental Planning and Assessment Act 2000* (EPA Act) that applies to State land.

SEPP 55 Clause 7 outlines considerations regarding contamination and remediation in determining development applications by local government authorities and provides requirements for investigations to be undertaken where a change of land use is proposed.

SEPP 55 also specifies when remediation works will require Development Consent from the Local Government Authority (LGA).

1.3.4 PFAS National Environment Management Plan

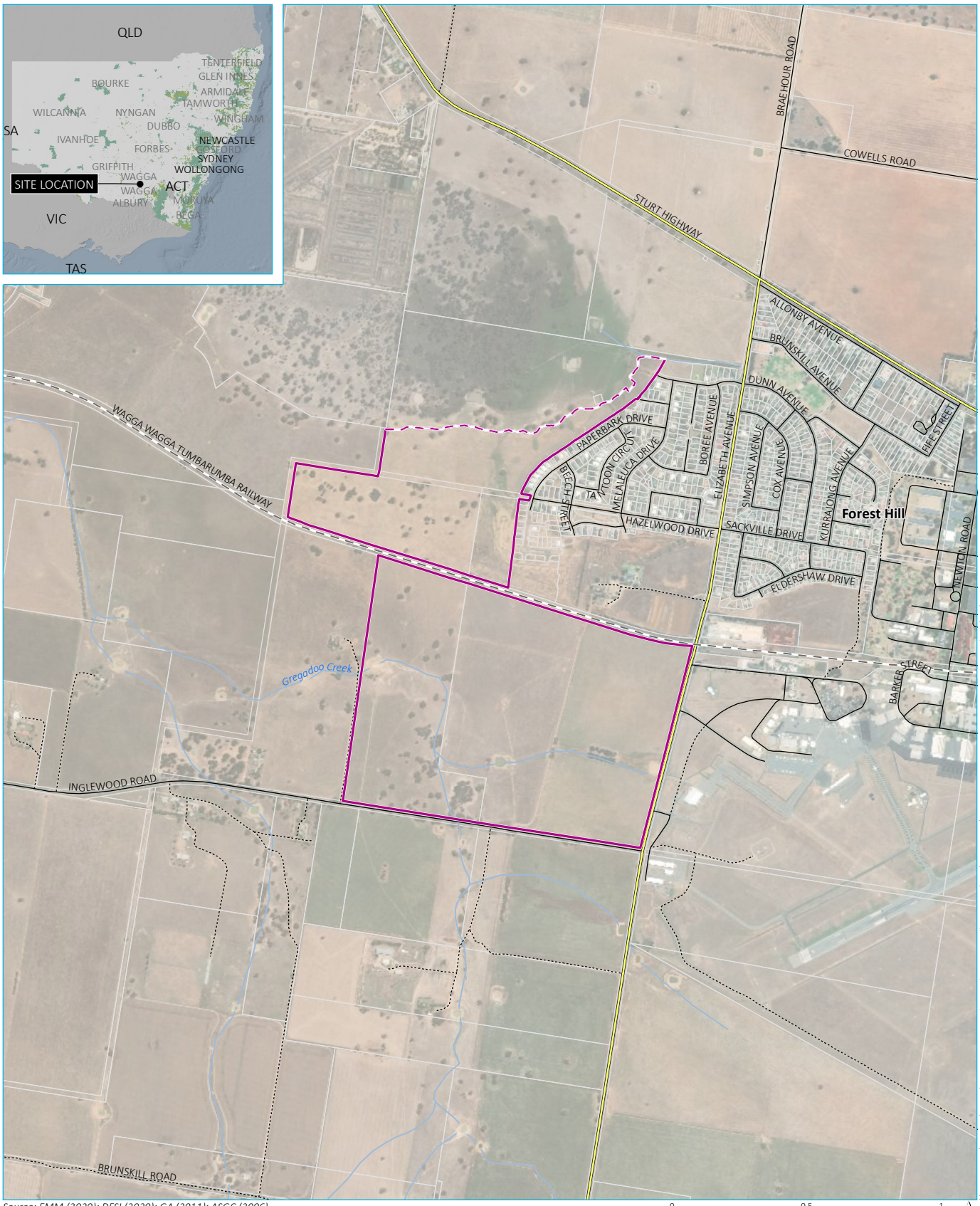
The PFAS National Environment Management Plan (NEMP) was developed by heads of EPAs (HEPA) across Australia and New Zealand to provide consistent guidance on the assessment and management of PFAS contamination. The current PFAS NEMP was agreed by HEPA in October 2019 and endorsed by Australia's Environment Ministers (excluding Queensland) and was published in January 2020.

1.4 Guidelines

Relevant guidelines made or endorsed by the NSW EPA that have been considered in this DSI include:

- the ASC NEPM[1];
- NSW EPA (2020) Guidelines for consultants reporting on contaminated land;
- NSW Department of Environment and Conservation (2007) Guidelines for the Assessment and Management of Groundwater Contamination;
- NSW EPA (1995) Sampling Design Guidelines; and
- the PFAS NEMP.

[1] The ASC NEPM is made under the *National Environment Protection Council Act 1994 (Cth)* and is given effect by individual legislation and guidelines in each state and territory.



Source: EMM (2020); DFSI (2020); GA (2011); ASGC (2006)

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GDA 1994 MGA Zone 55

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KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary
- NPWS reserve (refer to inset)
- State forest (refer to inset)

Site location

Brunslea Park Forest Hill
Detailed site investigation
Figure 1.1

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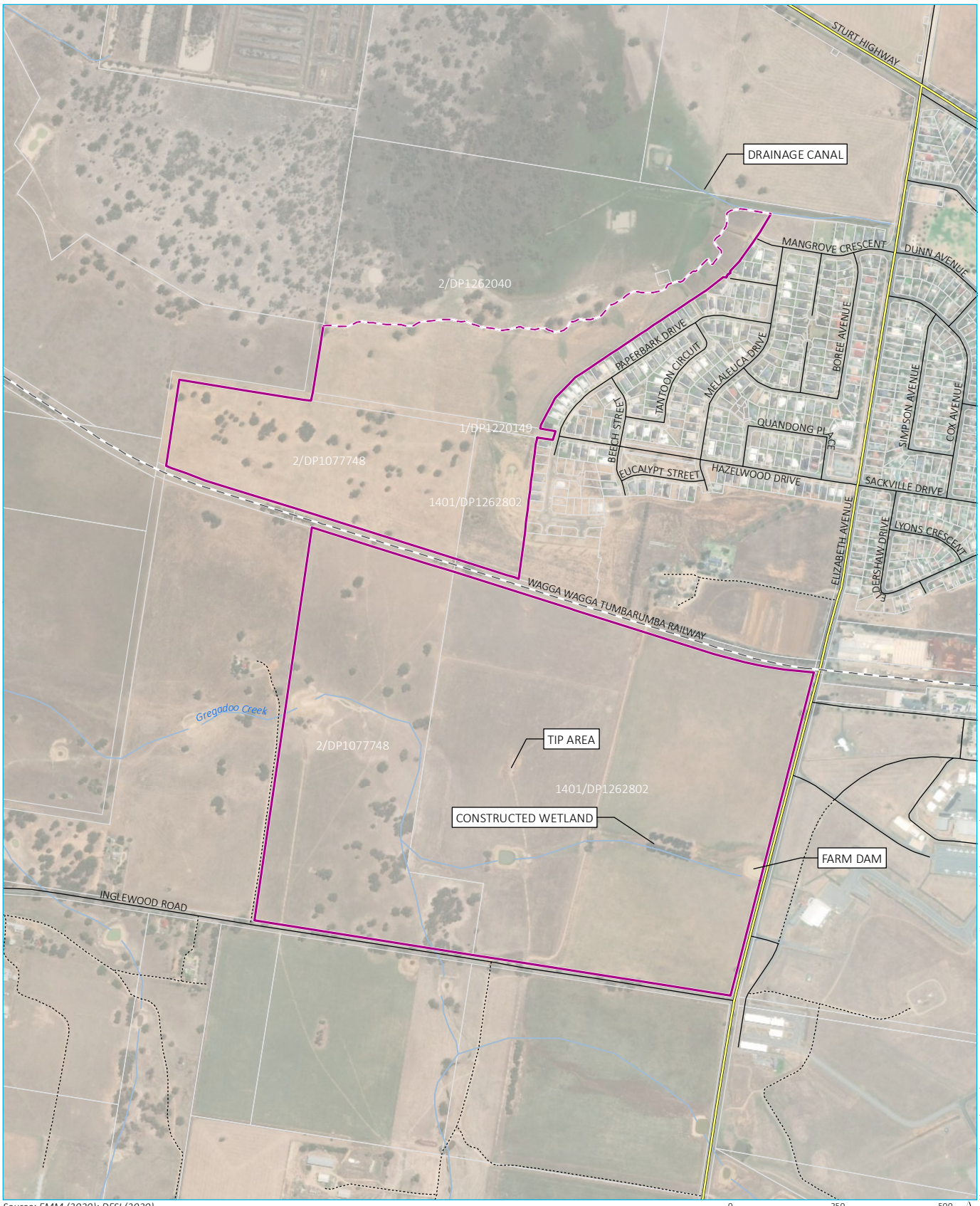

Source: EMM (2020); DFSI (2020)

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KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Site layout

Brunslea Park Forest Hill
Detailed site investigation
Figure 1.2

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2 Scope of work

In general accordance with the ASC NEPM, the following scope of work was completed to address the project objectives:

1. Preparation of a sampling, analysis and quality plan (SAQP), which outlined the scope of field investigations to be undertaken at the Site to achieve the project objectives. The SAQP also included setting the relevant data quality objectives (DQOs) to ensure data collected was of appropriate quality for the purposes of assessing contamination and making decisions regarding potential risks to future Site users, detailed in Section 8.1.

2. Completion of field investigations, including sampling of soil, sediment (from farm dams and surface water drainage lines), surface water and groundwater at the Study Area. The sampling design and rationale is discussed in Section 10.

3. Laboratory analysis of selected samples for a range of contaminants of potential concern (CoPC).

4. Analysis of field and laboratory data, including comparison of laboratory analytical results against site assessment criteria appropriate for residential land use.

5. Preparation of this report, documenting the works undertaken and the results of the investigations, in the context of the proposed rezoning application.

3 Environmental setting

3.1 Site location and description

The Site is located to the north-west and south of the existing Brunslea Park residential development, approximately 12 km east of Wagga Wagga CBD and 1 km west of RAAF Base Wagga in Forest Hill, NSW (refer to Figure 1.1). The Site comprises two irregular shaped parcels of land separated by a railway corridor, which runs east/west and is no longer in use. The Site layout is shown in Figure 1.2.

The northern portion of the Site is predominantly occupied by farmland with no marked northern boundary. For the purposes of the Planning Proposal the northern boundary of the Site has been defined as the 1 in 100-year flood line (183.75 m above Australia height datum (AHD)). The Gumly Gumly wetland extends to the north beyond this boundary and is excluded from the scope of this DSI. The eastern boundary of the Site is the existing Brunslea Park residential development, including an area of undeveloped land, which is currently occupied by a farm property but is zoned for residential land use.

The southern portion of the Site is located between the railway corridor and Inglewood Drive. Elizabeth Avenue forms the eastern boundary of the Site, while the western boundary is delineated by a fenceline with farmland beyond.

At the time of the DSI, the Site comprised grass covered paddocks with occasional trees. The majority of the paddocks are being used for cropping activities while others were being used to run stock (sheep and cattle). An area of waste disposal was observed in the central/southern portion of the Site (approximately 5 m width by 30 m length) as shown on Figure 1.2. Materials observed included scrap metal, soil, building rubble, oil drums and chemical containers, domestic refuse (including white goods and furniture), plastic and animal carcasses.

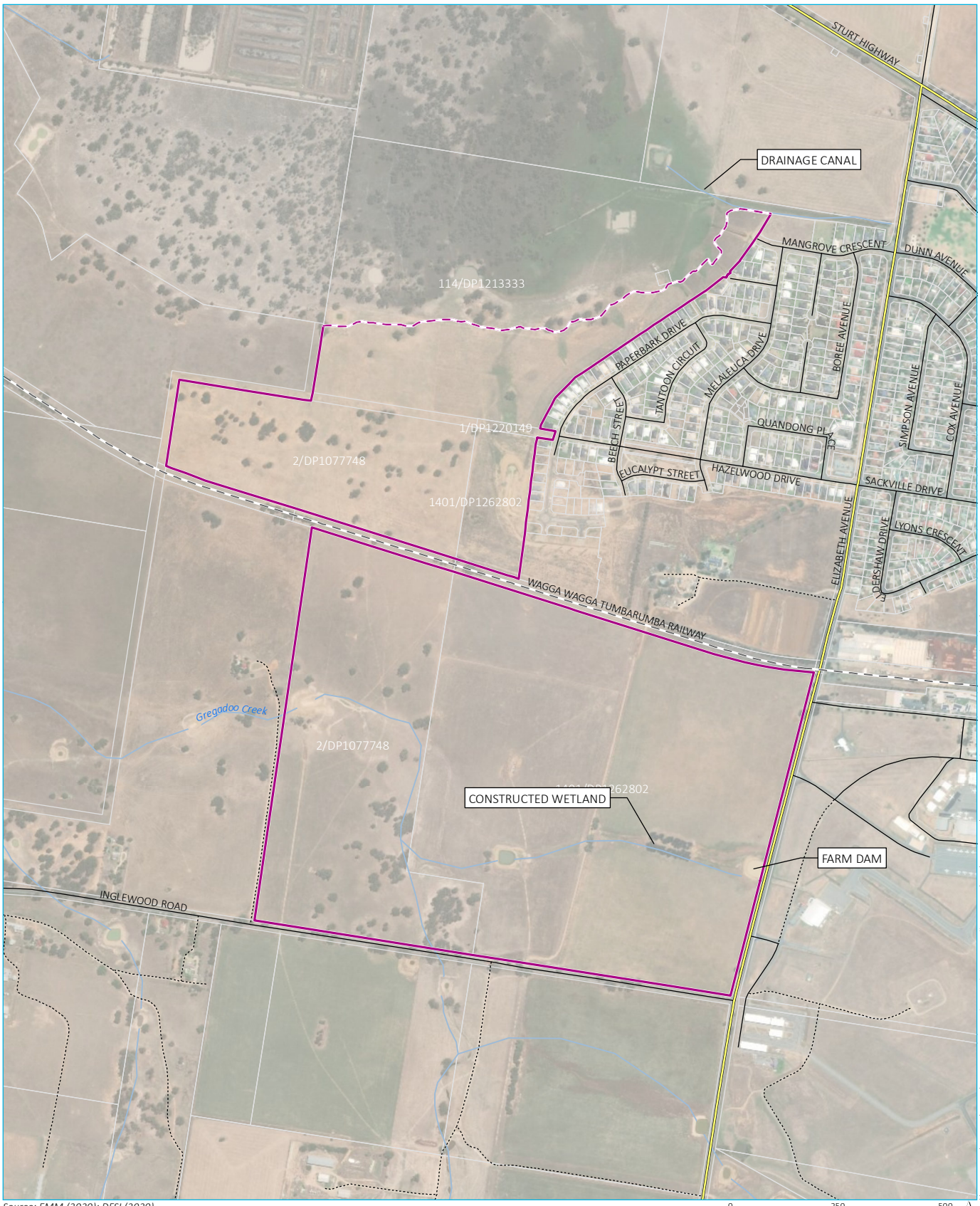
Several constructed farm dams were present within the Site, predominantly in the southern areas. Evidence of ephemeral surface drainage between the dams was noted, flowing in an east to west direction, however at the time of the DSI minimal surface water was observed. A constructed wetland was present in the south-eastern portion of the Site.

3.2 Study area identification

The Site comprises the following land:

- Part Lot 2 in DP126040, comprising the northern section of the Site up to the 1 in 100-year flood line;
- Lot 2 in DP1077748, comprising the south-western portion of the Site and a parcel of land to the north of the railway corridor;
- Lot 1401 in DP 1262802, being the remainder of the land to the south of the railway corridor and a portion of land to the north of the railway corridor and to the west of the existing Brunslea Park development; and
- Lot 1 in DP 1220149, comprising a rectangular strip of land between Lot 1401 and Lot 114.

A plan showing the Lot and DP boundaries within the Site is provided in Figure 3.1 while Site features are shown on Figure 3.2.



Source: EMM (2020); DFSI (2020)

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KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
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- Cadastral boundary

Lot and DP

Brunslea Park Forest Hill
Detailed site investigation
Figure 3.1

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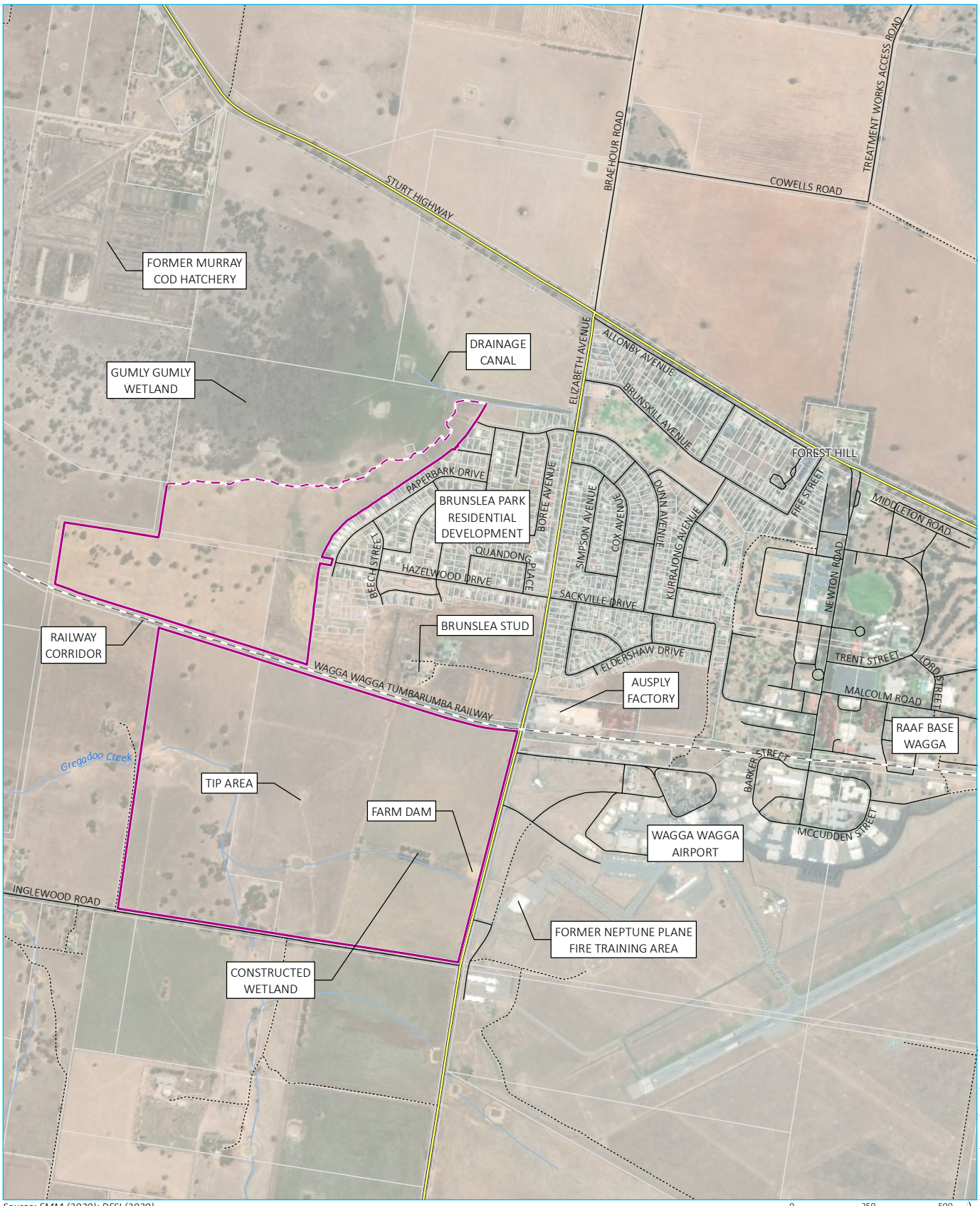

Source: EMM (2020); DFSI (2020)

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GDA 1994 MGA Zone 55

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KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Site features and surrounding land use

Brunslea Park Forest Hill
Detailed site investigation
Figure 3.2

EMM creating opportunities

3.3 Zoning

The Site is currently zoned RU1 – Primary Production in the Wagga Wagga Local Environmental Plan (LEP) 2010.

There are no heritage listings under the LEP 2010 within the Site. Part of the Site is listed on the LEP 2010 Terrestrial Biodiversity Map, associated with the wetlands to the north west of the Site and also an area in the parcel of land immediately north of the railway corridor. The objective of this listing is to protect, maintain or improve the diversity of native vegetation.

There is a small parcel of land listed as Vulnerable Land (LEP 2010) in the central portion of the Site. The objective of this listing is to protect, maintain or improve the diversity and stability of landscapes.

The northern portion of the Site and a small area in the south-western corner of the Site are listed as Water Resource – Groundwater in the LEP 2010. The objective of this listing is to protect and preserve groundwater sources.

Land immediately to the north west of the Site (the Gumly Gumly wetland) is identified on the Wagga Wagga City Council Flooding Map[2] and as Category 1 Bushfire Prone Land, plus a buffer zone.

3.4 Surrounding land uses

The Site is located in a generally rural and rural residential area, with the Brunslea Park development and the suburb of Forest Hill to the east and north-east. Notable features in the surrounding area are summarised in Table 3.1.

Table 3.1 Surrounding land uses

Direction	Surrounding land uses
North	Gumly Gumly wetland is located immediately to the north west of the Site. The remaining land to the north of the Site is generally rural and agricultural land. The Sturt Highway is located approximately 200 m to the north of the Site, running in a south-east/north-west orientation. The Murrumbidgee River is approximately 3 km to the north, flowing to the west. The Forest Hill wastewater treatment plant (WWTP) is approximately 2.5 km to the north-east of the Site.
East	Brunslea Park and the suburb of Forest Hill is located to the east of the northern portion of the Site. Beyond the residential development, RAAF Base Wagga is located approximately 1 km to the east. Wagga Wagga airport is located approximately 500 m to the east of the southern portion of the Site. The southern end of the runway is approximately 600 m from the Site boundary. There are a number of airport related developments to the east of Elizabeth Avenue, including hangars and taxiways. Big River Ausply, a building products manufacturer and supplier, has a factory on the eastern side of Elizabeth Avenue, approximately 100 m from the Site. There is a NSW Rural Fire Brigade facility on the eastern side of Elizabeth Avenue approximately 500 m to the east of the Site. The Bureau of Meteorology Wagga Wagga weather station is located approximately 100 m to the east of the Site.
South	Inglewood Road is located at the southern boundary of the Site, running east/west. Beyond the road, land uses are generally rural residential and agricultural. Residential density increases towards the suburb of Lake Albert, approximately 5.5 km to the south-west.

[2] https://maps.wagga.nsw.gov.au/intramaps90/default.htm?project=WaggaEx&module=Flooding%20Map

Table 3.1 Surrounding land uses

Direction	Surrounding land uses
West	Murray Cod Hatcheries is located approximately 700 m to the north west of the Site, comprising a series of surface water ponds and buildings. It is understood the business is no longer operating; however, the infrastructure remains in place. Land use to the west is generally rural residential or agricultural. Marshalls Creek is located approximately 2 km to the west of the Site, flowing in a northerly direction towards the Murrumbidgee River. There is a residential subdivision under construction approximately 1.5 km to the west (Governor's Hill).

3.5 Topography

The northern portion of the Site slopes gently to the north and north-west, while the southern portion of the Site slopes gently to the south and south-west. There is a ridgeline approximately in line with the railway corridor that separates the two portions of the Site.

Elevations at the Site vary between approximately 211 m AHD in the centre/eastern boundary of the Site, approximately 184 m AHD in the north-west and approximately 195 m AHD in the south-west.

3.6 Geology and Soils

The 1:100,000 Wagga Wagga and Kyeamba Valley geological map (Raymond 1993) shows the geology underlying the central and southern portions of the Site comprises colluvium consisting of poorly consolidated gravelly siltstone, while in the northern area alluvium is present, both of the Cainozoic era.

A detailed site investigation completed for the Department of Defence (Defence) at RAAF Base Wagga and surrounds (the Defence DSI)[3] notes that these sedimentary units are likely to overlap at the base of slopes and a boundary can be difficult to identify. The Defence DSI further noted that the alluvium contains coarser grained sediments near the base of the unit and closer to the Murrumbidgee River, with clays and silts dominating the upper sections of the unit with a surficial clay layer. The alluvium has been separated into two formations: the upper, Cowra Formation and underlying Lachlan Formation. Together, the alluvium is approximately 80 m thick in the vicinity of the Site.

There are outcrops of Wantabadgery granite of Silurian age to the west and north of the Site, with this unit also likely to underlie the sediments on the Site.

3.7 Hydrogeology

The Defence DSI states that the Lachlan Formation is extensively targeted for groundwater supplies within the region. Further away from the Murrumbidgee River, where the alluvium becomes increasingly dominated by clays and silts of the Cowra Formation, there was reportedly a marked decline in the number of registered bores, indicating a reduced potential for water supply.

[3] Comprehensive Investigation of Per- and Poly-Fluoroalkyl Substances (FAS) at RAAF Base Wagga, Department of Defence, Detailed Site Investigation, 5 June 2018, Jacobs Group (Australia) Pty Ltd

Vertical connectivity within the alluvium/colluvium was expected to be reasonable, although this would vary locally with the composition of the sediments. Connectivity with the underlying granite was considered to be limited. Water level information in the Defence DSI reportedly indicated that the overlying clays of the Cowra Formation can act as a semi-confining or confining layer, with water in the underlying sands and gravels under pressure.

Groundwater flow in the region was reported to be towards the north-west towards the Murrumbidgee River. Depth to groundwater is expected to be between 10 and 20 m bgl in the vicinity of the Site.

Groundwater in the Lachlan Formation is reportedly of good to fair quality drinking water, while groundwater in the overlying Cowra Formation has a higher salinity and is more suitable for stock-watering, non-potable domestic and irrigation use.

A water use survey was undertaken as part of the Defence DSI in 2017. No respondents indicated that private groundwater bores in the vicinity of the Site are used for potable water supply. Groundwater was reportedly abstracted for use at the Murray Cod Hatchery, to the north-west of the Site.

Groundwater dependent ecosystems (GDE), where ecosystems rely on the surface expression of groundwater, were identified within the Site associated with the ephemeral Gregadoo Creek in the southern area. Gumly Gumly wetland to the north west was also identified as a GDE.

3.8 Surface water and drainage

Surface water in the northern portion of the Site flows to the north and north-west, consistent with topography, towards Gumly Gumly wetland. The PFAS Management Area Plan (PMAP)[4] prepared for RAAF Base Wagga reported that during times of high water flow, water from the wetland can discharge into the Murrumbidgee River via Marshalls Creek.

In the southern portion of the Site, surface water flow generally follows topography to the south and south-west. There are a number of constructed farm dams/detention ponds and a constructed wetland in the central/south-eastern Site area. These features feed the ephemeral Gregadoo Creek, an ephemeral stream that flows to the west and north-west, ultimately discharging to Marshalls Creek and the Murrumbidgee River with sufficient water flow.

In the surrounding area, there is a surface water drain that flows from Forest Hill beneath Elizabeth Avenue and adjacent the northern boundary of the Site before discharging into the Gumly Gumly wetland. It is understood that this surface water drain originates near the RAAF base and may collect stormwater from RAAF and airport operations as well as from the Forest Hill council stormwater network.

Surface water drainage from parts of the airport land also drain overland into road drains on Elizabeth Avenue and into a farm dam at the eastern boundary of the Site. Water from this dam appears to drain overland to the west, into a constructed wetland and onwards to Gregadoo Creek.

3.9 Climate

Climate data collected from Wagga Wagga AMO (site number 072150), located approximately 100 m to the east of the Site, indicates that the Site is located in a temperate region, with mean maximum temperatures ranging between 12.8°C (July) and 31.9°C (January) and mean minimum temperatures of between 2.8°C (July) and 16.4°C (January/February).

Average annual rainfall is 571.5 millimetres (mm), with most rainfall in the spring months (55.8 mm in October) and the lowest rainfall in autumn (39.7 mm in April).

[4] RAAF Base Wagga PFAS Management Area Plan, Final, September 2019, Australian Government Department of Defence

4 Site history

4.1 Land titles

A review of current and historic land titles indicates that since settlement, between the late 1800s and early 1900s, the Site has generally been owned by individuals and used for agricultural purposes. A summary of the land titles is provided in Table 4.1. It is noted that Lot boundaries have changed at the Site since the land titles were obtained as part of preliminary investigations. Current lot boundaries are shown on Figure 3.1.

Table 4.1 Land titles

Land ID	Date	Title holder
Lot 2 DP 1262040	Current	Douglas Clive Brunskill
	1951–present	Various members of the Brunskill family, historically identified as farmers (1951–1982)
	1908–1951	Various members of the Power family, identified as farmer (1922–1949) and butcher (1949–1951)
	Pre 1908	Crown Land
Lot 2 DP 1077748	Current	Douglas Clive Brunskill
	1951–present	Various members of the Brunskill family
	1895/1908–1951	Various members of the Power family, identified as farmer (1922–1949) and butcher (1949–1951)
	1889–1895*	William Reardon
	Pre 1889/1908	Crown Land
Lot 1401 DP 1243790 (Formerly Part Lot 1400 DP 1262802)	Current	Douglas Clive Brunskill
	1961–present	Various members of the Brunskill family, historically identified as grazier (1961–1987)
	1950–1961	Mary Windeyer Eldershaw
	1922–1950	Sackville Pty Limited (formerly Sackville Limited)
	1915–1922	Mary Agnes Lyons
Lot 1 DP 1220149	NA	Road reserve

The land titles exclude the railway line that dissects the Site from east to west. The title plans also show an easement to drain water (2.5 m wide) to the north of Lot 2 DP 1262040, consistent with the open drainage channel. The south-western portion of the Site also contains easements for electricity purposes (20 m wide and 10 m wide).

4.2 Aerial photographs

Aerial photographs of the Site were obtained from 1966 to the present day, as summarised in Table 4.2 below. Arial photographs are included in Appendix A.

Table 4.2 Aerial photograph review

Year	Site	Surrounding Area
1966	The Site is mostly undeveloped, covered by grass and small stands of trees. There is a building in the eastern portion of the Site, accessed by two driveways leading to the property from Elizabeth Avenue. A farm dam is visible at the south end of the eastern Site boundary, and a watercourse appears to be present in the south-western corner of the Site. An unsealed driveway is visible in the south-western corner of the Site, leading to a property located immediately off-site to the west.	The surrounding areas to the north, west and south appear to be consistent with land uses on the Site, comprising rural properties and vegetated land. The area of Gumly Gumly wtland, to the north-west if the Site, has denser vegetation and possible surface water accumulations. A railway line dissects the northern and southern portion of the Site. To the east, development along the Sturt Highway is visible, as well as developments associated with RAAF Base Wagga. A runway is present to the south-east, approximately 750 m from the Site boundary. The runway has a south-west/north-east orientation. There is a taxiway leading from the RAAF base to the runway. A building to the north-west of the runway on the eastern side of Elizabeth Avenue is visible, understood to be the Wagga weather station.
1971	The south-eastern portion of the Site appears to be occupied by cultivated vegetation, which is darker and denser than the surrounding areas. No other significant changes within the Site were visible.	Development to the west of the RAAF base at the northern end of the taxiway is visible, comprising roads, apron and at least two buildings. This development is consistent with the current Wagga Wagga Airport location. An unsealed cross runway is visible to the south-east. An aeroplane body is visible approximately 100 m from the south-eastern corner of the Site. It is understood that this is a former fire training area (refer Section 4.3). A property to the east of Elizabeth Avenue, near the driveways to the property on the Site, was noted. This building is consistent with the current Ausply factory. Development to the immediate north-west of the Site is visible, comprising areas of exposed soil and five possible detention ponds or lagoons. This development is consistent with the current location of the Murray Cod Hatchery.
1980	No significant changes within the Site.	The residential development of Forest Hill is visible to the east of the Site. Development to the north-west had expanded, including more ponds/basins and buildings and an access road to the Sturt Highway.

Table 4.2 Aerial photograph review

Year	Site	Surrounding Area
1998	A second building is present in the eastern portion of the Site, to the south-west of the original property. An area of ground disturbance is visible in the south-eastern corner of the Site and appears to be connected to the farm dam at the eastern Site boundary. Another farm dam is visible in the central southern portion of the Site.	The settlement of Forest Hill has expanded to the south and east and along the southern side of Sturt Highway. There is also residential development on the western side of Elizabeth Avenue, adjacent to the north-eastern corner of the Site. A drainage channel is visible to the north of the Site, which appears to discharge into a farm dam near the north-western Site boundary and the wetlands. This drainage line is noted to contain denser vegetation that the surrounding area. An area of soil disturbance just outside the Site's eastern boundary and an unsealed track appear to be associated with the residential development. The Ausply factory on the eastern side of Elizabeth Avenue, to the east of the central portion of the Site, has expanded. Further development of Wagga Wagga airport to the west of the RAAF base visible, including seven buildings, areas of car parking, roads and an expanded apron.
2002	The central and southern portions of the Site appear to be used for agriculture, with extensive cropping evident. Two further buildings are visible in the eastern portion of the Site, likely to comprise sheds or workshops. The soil disturbance previously noted in the south-eastern portion of the Site appears to be a constructed wetland.	Further residential development on the western side of Elizabeth Avenue is visible, to the east of the Site. There appears to be more surface water in the wetlands to the north-west of the Site. Surface water is visible in the drainage channel adjacent the north-east of the Site and flowing into the wetlands. The Ausply factory to the east has expanded and piles of timber are present outside of the factory building. A large building (hangar) has been erected at Wagga Wagga airport and aeroplanes are visible on the aprons. Further development including roads and taxiways was also noted. The aeroplane body is no longer visible to the south-east of the Site; however, areas of ground disturbance remain apparent in this area.

Table 4.2 Aerial photograph review

Year	Site	Surrounding Area
2010	There are no significant changes on-site.	The Brunslea Park residential development to the north-east of the Site, west of Elizabeth Avenue, is visible. Two constructed stormwater retention ponds are visible to the north-west of the Site, within the wetlands. Significant development has taken place around Wagga Wagga airport, including buildings, car parking, an expanded apron and road network. A development on the eastern side of Elizabeth Avenue, immediately south-east of the Site is present in the vicinity of the former aeroplane body/fire training area. The development appears to include stockpiles and exposed earth with some areas of black staining and processing machinery in the centre of the area. It is understood this was a bitumen plant (refer Section 4.3). A number of the ponds appear dry on the Murray Cod Hatchery property to the north-west of the Site.
2013	There are no significant changes within the Site.	Cropping activities are evident to the north of the Site adjacent the Sturt Highway. The Brunslea Park development to the north-east has continued to expand. Wagga Wagga airport has continued to expand, with additional aprons and hangars noted to the south of the existing developments. The bitumen plant to the south-east of the Site has been removed and this area partially sealed, with a large building (hangar) constructed and an access road to the taxiway and runway. A large building has also been constructed to the east of the Site near the farm dam on the eastern boundary. This building appears aviation related with an apron and access road to the main Wagga Wagga airport aprons and hangars.
2016	The Site appears a lot more vegetated than previous photographs. The Brunslea Park development appears to have marginally encroached into the eastern portion of the Site, near the buildings. The second driveway from the buildings to Elizabeth Avenue has been removed.	There are additional buildings and aprons associated with developments to the east of the Site. The Brunslea Park development has expanded and now abuts the eastern boundaries of the Site. No other significant changes were noted in the surrounding area.
2019	Some areas of soil disturbance were visible around the eastern boundaries in the northern portion of the Site, likely associated with the adjacent Brunslea Park development. No other significant changes were noted.	Most of the ponds at the Murray Cod Hatchery property appeared dry. The Brunslea Park development had continued to expand up to the Site boundaries in the north-eastern portion of the Site. No other significant changes were noted in the surrounding area.

4.3 Other historical information

The Defence DSI included a historical summary of RAAF Base Wagga, based on previous investigations undertaken by others. The summary noted that construction of RAAF Base Wagga commenced in 1939 by the Commonwealth. The base was developed with residential and recreational precincts to the north of the railway corridor and flying work areas, including the airfield, to the south.

An aircraft parked in the western area of the airfield, to the immediate east of the intersection of Elizabeth Avenue and Inglewood Road, was visible in a photograph from 1971 (provided by the RAAF Base Wagga Heritage centre, not dated). This is described as the former Neptune Plane Fire Training Area. The plane was reportedly set alight using diesel or kerosene for training purposes. This photograph (see Plate 4.1) also shows the farm dam at the eastern Site boundary in the background. Based on current understanding of drainage, it is likely that runoff from the Neptune Plan Fire Training Area flowed north along Elizabeth Avenue drains and into the farm dam on-site.

The Neptune Plane Fire Training Area was subsequently occupied by a bitumen plant, as observed on the 2010 aerial photograph.

The Defence DSI also identified two former landfill areas in the western portion of the airfield, close to the eastern boundary of the Site. Former landfilling area 1 (RMV0092) has an area of approximately 10 ha and is located at the south-western boundary of the airfield. This area was reportedly used for stockpiling soils, including from the former Neptune Plane Fire Training Area and bitumen plant. An area of buried waste (NSW1099) was shown on Figure 6B of the Defence DSI, was not discussed in detail in the report. This area was located at the north-western boundary of the airfield, directly across Elizabeth Avenue from the Site.

The approximate locations of these areas are shown on Figure 3.2.

Source: Jacobs 2017, supplied by RAAF Base Wagga Heritage Centre, undated

Plate 4.1 Historical photograph showing the Neptune Plane Fire Training Area to the east of the Site

5 Data base search results

5.1 EPA databases

5.1.1 Contaminated Land

A search of the NSW EPA contaminated land record (26 August 2020) did not identify any notices on the Site or in the surrounding area.

No areas of the Site or sites in the surrounding area are listed on the NSW EPA list of notified sites (as at 14 August 2020).

5.1.2 NSW PFAS investigation program

The Site is not listed on the NSW Government PFAS investigation program. RAAF Base Wagga is listed on the NSW PFAS investigation program and the factsheet available on-line[5].Appendix B notes that "*a small number of residents at surrounding properties have been supplied with tailored advice to reduce their exposure to PFAS*".

5.1.3 Environment Protection Licences

There are three licences issued under the POEO Act for properties in the vicinity of the Site, as shown in Table 5.1.

Table 5.1 Environment Protection Licences (EPL)

EPL number	Licence holder and address	Licensed activities	Approximate distance and direction from Site
1046	Ausply Pty Ltd/Big River Group Pty Ltd Elizabeth Avenue, Forest Hill	Timber Mill: Wood or timber milling or processing	100 m east
1874	Suez Recycling and Recovery Pty Ltd Braehour Road, Forest Hill	Forest Hill Liquid Waste Storage & Transfer Station: Waste storage – hazardous, restricted solid, liquid, chemical, clinical and related waste and asbestos waste	2 km north-east
1670	Wagga Wagga City Council Braehour Road, Forest Hill	Forest Hill Sewage treatment System: sewage treatment processing by small plants	2.4 km north-east

5.2 Other databases

The Site is not listed on the Airservices Australia National PFAS Management Program.

RAAF Base Wagga is listed on the Defence PFAS investigation and management program and on the Defence 3-year regional contamination investigations, with fire training areas and waste disposal areas listed as of concern on the RAAF Base Wagga Factsheet[6]. Other activities and facilities at the base that could result in contamination include vehicle and aircraft maintenance, engineering works, wash-down bays, bulk fuel and chemical storage, firing ranges, substations/transformers and an incinerator for the disposal of medical waste.

[5] https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/pfas/raaf-base-wagga-pfas-factsheet.pdf

[6] RAAF BASE WAGGA, NEW SOUTH WALES, Australian Government, Department of Defence, 2017

5.3 Registered groundwater bores

A review of the Bureau of Meteorology registered groundwater bores database identified three bores on-site used for irrigation purposes. The Defence DSI noted that these bores were not in use.

6 Department of Defence investigations

6.1 Preliminary Sampling Program (PSP)

In 2016, Defence implemented a preliminary sampling program (PSP)[7] at RAAF Base Wagga to provide initial information on the potential for off-site presence of PFAS and inform the need for further investigations on and around the base. The PSP included sampling of groundwater from existing monitoring wells, collection of two surface water/stormwater samples from drainage locations that may indicate off-site migration of PFAS contamination, and assessment of the analytical results against Defence PFAS screening levels and other nationally acceptable assessment criteria.

The samples were collected on 15 June 2016 from locations presented in Table 6.1.

Table 6.1 PSP sampling locations

Location ID	Media sampled	Location description
WAQ_SW001	Surface water	Off-base, Elizabeth Avenue at south-western corner of the RAAF Base – approximately 350 m from south-eastern corner of the Site
WAQ_SW002	Surface water	Off-base, Elizabeth Avenue, western RAAF Base boundary – immediately opposite the farm dam at the eastern boundary of the Site
GW030714	Groundwater	Off-base, approximately 250 m north-east of Sturt Highway/Elizabeth Avenue intersection
GW047281	Groundwater	Off-base, approximately 1 km north of RAAF Base entrance from Sturt Highway
GW047279 (Bore 5)	Groundwater	Off-base, approximately 1 km north of RAAF Base entrance from Sturt Highway

The results of the sampling are summarised in Table 6.2 below. None of the results were greater than the adopted Defence screening criteria for PFAS (drinking water or recreational use). Comparison of the results against current screening criteria (PFAS NEMP) indicates that concentrations of PFOS+PFHxS in surface water were greater than the health-based guidance levels for drinking water (0.07 micrograms per litre (µg/L)) and less than the guidance values for recreational water use (0.7 µg/L).

[7] Jones Lang LaSalle Defence per- and poly-fluoroalkyl substances (PFAS) Environmental Management Preliminary Sampling Program RAAF Base Wagga Final Report, September 2016, GHD

Table 6.2 PSP results (µg/L)

	WAQ_001	WAQ_002	GW030714	GW047281	GW047279 (Bore 5)
PFOS	0.1	0.08	<0.01	0.04	<0.01
PFOA	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FtS	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 FtS	<0.05	<0.05	<0.05	<0.05	<0.05
PFOS + PFHxS	**0.18**	**0.13**	<0.015	0.05	<0.015

PFOS perfluorooctane sulfonate
PFOA perfluorooctanoic acid
6:2 FtS 6:2 Fluorotelomer sulfonate
8:2 FtS 8:3 Fluorotelomer sulfonate
PFHxS perfluorohexane sulfonate
bold denotes exceedance of PFAS NEMP health-base guidance value

Surface water from both sampling locations is considered likely to migrate onto the southern portion of the Site, either via flow in Gregadoo Creek (WAG_SW001) or by entering the farm dam at the eastern boundary of the Site and migrating via surface water flow through the constructed wetland and into Gregadoo Creek (WAG_SW002).

Based on the findings of the PSP, Defence commenced the RAAF Base Wagga DSI.

6.2 Defence Detailed Site Investigation (DSI)

The Defence DSI was undertaken at RAAF Base Wagga and in the surrounding areas in 2017/2018 as part of the national Defence PFAS Investigation and Management Program. The DSI included both desktop and field studies to assess the extent of PFAS contamination and assess risks to potential human and ecological receptors.

The Defence DSI described RAAF Base Wagga as comprising three separate areas: the hangar precinct, training and residential precincts and the Wagga Wagga City Domestic Airport (the Airport). The Airport comprises approximately 194 ha and is operated by Council on a 30-year lease agreement.

Aviation Rescue Fire Fighting (ARFF) services are provided at the base and include services for the Airport. Prior to undertaken detailed sampling, the Defence DSI developed a preliminary conceptual site model (CSM) for the base, which identified potential sources of PFAS both on- and off-base as summarised in Table 6.3.

Table 6.3 Potential sources of PFAS at RAAF Base Wagga and surrounding areas

Potential source	Comments	Distance and direction from Site
On-base		
Fire Training Area (FTA)	At the eastern end of the runway	Approximately 2 km east
Fire station	Includes aqueous film forming foam (AFFF) storage area	Approximately 700 m east
Former fire station and fire extinguisher concrete pad	The former fire station was demolished sometime between 1990 and 1995	Approximately 750 m east
Abandoned sewage services	Operational until 1993, comprising screening beds and two trickling filter tanks	Approximately 1 km north-east
Vehicle maintenance	Possibly including maintenance of fire fighting vehicles	Approximately 900 m east

Table 6.3 Potential sources of PFAS at RAAF Base Wagga and surrounding areas

Potential source	Comments	Distance and direction from Site
Former Landfilling Area (RMV0092)	Approximately 10 ha, including stockpiling of soils from the former bitumen plant and former Neptune Plane Fire Training Area	Approximately 200 m east
Former Landfilling Area (RMV0094)	Adjacent the fire training area	Approximately 1.7 km east
Buried Waste (NSW 1099)	Not listed as a potential source in the DSI, but shown on DSI Figure 6B	Approximately 250 m east
Former bitumen plant and Neptune Plane Fire Training Area	The plane was reportedly set alight using diesel, petrol and kerosene	Approximately 100 m east
Former toxic chemical store	Limited information available	Approximately 2 km south-east
Aircraft parking area	An area where AFFF was reportedly discharged (no detailed information available)	Approximately 1 km east
Fire extinguisher training	Used for joint Defence and airport ARFF training every two years using handheld extinguishers	Approximately 1.5 km east
Former Apprentices Club	Demolished using a controlled burn in 1985	Approximately 1.2 km east
Residential building fire	Exact location unclear, AFFF may have been used	Approximately 1.2 km north-east
Irrigation areas including playing fields and golf course	Secondary source through use of potentially impacted water from the former sewage services on-base.	Approximately 1.5 km to 2 km north-east
Stormwater and sewer infrastructure	Secondary source from contaminated soil, sediment and water in stormwater and sewer network	Some discharge to stormwater via drainage canal to the north of the Site
Off-base		
Forest Hill Rural Fire Brigade	Potential for AFFF to be used or stored, no known investigations undertaken	Approximately 500 m east
Forest Hill WWTP	Treats wastewater from RAAF Base Wagga. May use water and biosolids in surrounding land	Approximately 2.5 km north-east
Kooringal Sewage Treatment Plant	Discharges treated water via Marshalls Creek or used as irrigation	Approximately 4 km west

While all identified PFAS sources are considered to be relevant to the Site in the context of overall PFAS migration from RAAF Base Wagga, items highlighted in grey in Table 6.3 are noted to be of particular relevance due to either their close proximity to the Site or, in the case of stormwater/sewer, the potential for discharge through the drainage canal to the north of the Site and impact the wetlands adjacent the north-west of the Site.

The Defence DSI included a series of investigations, designed to characterise on-base sources of PFAS, investigate overland migration pathways and assess groundwater migration. Soil sampling in drainage swales at the north-western corner of the base and on Council land was also undertaken. Areas subject to irrigation and bio-solids application and the former Council landfill to the north of the base were also assessed. However, due to the distance and direction from the Site, and the inferred direction of groundwater flow, these areas are not considered applicable to this DSI and have therefore not been addressed further.

Assessment of overland flow pathways included surface water and sediment/soil in Gregadoo Creek and Gumly Gumly Wetland, both applicable to this assessment. Assessment of groundwater migration also included groundwater sampling from wells close to the Site. The results of the Defence DSI investigations are summarised below.

Table 6.4 Summary of the Defence DSI results

Item	Results
Geology	Installation of paired groundwater monitoring wells was used to provide further information on the geological formations underlying the base and the surrounding area. The wells identified the upper Cowra Formation to comprise high plasticity dense clays with limited permeable horizons. The lower Lachlan Formation had increased sand and gravel content, characterised by quicker penetration during drilling and increased water strikes. All boreholes were found to have a surficial clay layer, which thinned towards the north-west.
Hydrogeology	Isolated and discontinuous perched groundwater was encountered during drilling, typically associated with the interface between fill materials and the Cowra Formation. Hydraulic connectivity between perched water and regional groundwater was not expected, due to the low permeability of the Cowra Formation. Aquifer testing indicated a high degree of variability in the Lachlan Formation, although hydraulic conductivity was generally found to increase towards the north-west with bores in the Gumly Gumly wetland four orders of magnitude higher than some wells on the base. Monitoring of groundwater levels indicated little or no response to rain events, although the monitoring period was noted to be short.
Soil	The highest concentrations of PFAS were reported in soil samples from on-base source areas, including the FTA, fire station, fire extinguisher concrete pad and former fire station. Potential source areas close to the Site, including former landfilling area 1, buried waste and the Neptune Plane FTA, were much lower with no concentrations greater than the human health guidance levels.
Perched groundwater	Insufficient water was available for sampling in landfilling areas. A perched water sample obtained from the Neptune Plane FTA had a concentration of PFOS+PFHxS greater than the human health guideline value (drinking water). The highest concentrations of PFAS were again reported in the main source areas on-base (the FTA, fire station and concrete pad/former fire station). Hydrogeological information suggested that perched water beneath the base would not migrate vertically due to the impermeable Cowra formation geology, but rather would discharge as surface flow when the unit becomes saturated. The Defence DSI concluded that there were unlikely to be beneficial uses of perched water and therefore no human health risk was expected, despite PFAS concentrations in excess of the human health-based guidelines levels.
On-site drainage	Shallow soil samples collected from low points in swales leading from the north-west portion of the base did not return PFAS concentrations greater than the human health (commercial /industrial land use) or ecological guidelines levels. One sample from Council land (off-base) where overland flow may occur, returned a PFOS+PFHxS concentration greater than the human health guidelines for residential land use with accessible soils. A stormwater sample from an on-base drainage pipe returned a concentration of PFAS greater than the drinking water guidelines, which was stated to indicate that PFAS emissions from the Base are discharging into the Council stormwater network, which leads to Gumly Gumly wetland. Shallow soil samples from the south-western portion of the base, near the Neptune Plane FTA and the former bitumen plant, did not report PFAS at concentrations greater than the human health (industrial / commercial land use) or ecological guidelines. A surface water sample collected from a drainage swale in this area returned a concentration of PFOS+PFHxS greater than the drinking water and recreational water use guidelines.

Table 6.4 Summary of the Defence DSI results

Item	Results
Off-Base drainage	Surface water samples collected from the drainage canal leading from Elizabeth Avenue towards Gumly Gumly wetland reported PFOS concentrations greater than the ecological guideline value and PFOS+PFHxS concentrations greater than the recreational water use guidelines, on one occasion. Surface water samples collected from the Gumly Gumly wetland, farm dams to the south of the wetland and a drainage ditch leading to Marshalls Creek, reported concentrations of PFOS and PFOS+PFHxS greater than the ecological and recreational water use guidelines. Results from soil and sediment samples in this area were less than the human health (recreational land use) guideline and direct ecological guideline, but greater than the ecological guidelines for indirect exposure. Surface water, sediment and soil samples collected from drainage pathways towards Gregadoo Creek, in the southern portion of the Site, did not report concentrations of PFAS greater than the human health or ecological guidelines values. However, surface water samples from Marshalls Creek, which receives discharge from Gumly Gumly wetland, returned concentrations of PFAS greater than the human health and ecological guidelines.
Groundwater	Groundwater samples from wells installed within the Gumly Gumly wetland targeting the Lachlan Formation reported PFOS+PFHxS concentrations greater than the human health (drinking water) guidelines but less than the recreational water guideline value. Surface water and groundwater samples collected from the Murray Cod Hatchery (to the north-west of the Site) returned PFAS concentrations greater than the human health and ecological guidelines. It is understood that groundwater is pumped into the holding ponds at this facility.

The revised CSM, based on the findings of the detailed investigations, confirmed ***sources*** of PFAS at the RAAF Base Wagga as the FTA, fire station, fire extinguisher concrete pad and former fire station and stormwater and sewer infrastructure. Off-Base, Gumly Gumly wetland was confirmed as a secondary source as a result of potential hydraulic conductivity between geological formations in this area and receipt of surface water runoff via the drainage canal, and the subsequent potential for vertical migration of contaminants.

The primary confirmed transport ***pathway*** for PFAS contamination that is likely to affect the Site is stormwater flow from the base via the drainage canal at the northern boundary of the Site, which discharges into Gumly Gumly wetland. Additionally, in the vicinity of Gumly Gumly wetland and the Murray Cod Hatchery, there appears to be a vertical migration pathway between the overlying Cowra Formation and lower Lachlan Formation. As a result, contaminants in surface water have the potential to impact underlying groundwater reserves although further assessment was considered to be required to confirm this interaction.

Receptors relevant to the Site were identified as:

- Construction and maintenance workers involved in sub-surface works. This may be relevant for builders and other works involved in the proposed residential development of the Site, such as installation of foundations and services.
- General human receptors, including recreational users of Gumly Gumly wetland, users of groundwater, consumers of home grown produce irrigated with surface, bore or dam water, and consumers of fish and shellfish from the Murrumbidgee River and from farm dams.
- Livestock, via consumption of pasture material, vegetation of water form dams/surface water drainage.
- Terrestrial and aquatic ecology.

Further investigations were considered necessary to further refine the CSM and address data gaps and variability in the surface water and groundwater sampling undertaken.

6.3 Human health and ecological risk assessment (HHERA)

Following the Defence DSI, a HHERA[8] was undertaken to evaluate health risks posed by PFAS in off-base areas. In addition to the PSP and Defence DSI, the HHERA also took into account additional sampling, which included aquatic biota, surface water at the Forest Hill WWTP, sewage and stormwater on- and off-base, surface water and sediment sampling from off-site creeks and farm dams and groundwater sampling in Gumly Gumly wetland.

The HHERA identified that risk issues generally relate to surface water discharged from the RAAF Base Wagga, and the use of PFAS impacted groundwater on properties including the Murray Cod Hatchery.

Risks associated with direct contact with PFAS impacted soil and sediment, ingestion of potable water (including town supplies) and consumption of fish from the Murrumbidgee River (except carp), Marshalls Creek, Gregadoo Creek and Kyeamba Creek were considered low and acceptable, although for groundwater this was noted to be subject to groundwater modelling and ongoing monitoring. Direct contact associated with non-potable and recreational use of water was also considered acceptable.

Elevated risks were considered possible associated with the consumption of carp from the Murrumbidgee River, of full-size fish from Murray Cod Hatchery, home slaughtered meat, eggs, home-grown fruit and home-grown vegetables.

Ecological risk was focused on bioaccumulation in higher order consumers and direct toxicity for aquatic ecology; and concluded that adverse impacts to the environment could not be precluded.

6.4 Summary of results applicable to the Site

The Defence investigations included a number of sampling locations within, and in the immediate vicinity of, the Site. A summary of the results is provided below.

Table 6.5 Summary of sampling results within the Site

Media	Location/Description	Results
Surface water	Land to the north-west of the Site	PFHxS+PFOS was reported at concentrations greater than the human health screening level (recreational water use) in five locations, with a maximum concentration of 2.28 µg/L reported in sample SW253 from a farm dam to the immediate south of the wetland.
	Southern portion of the Site	Surface water samples were collected from the farm dam at the eastern Site boundary near Elizabeth Avenue, as well as along the flow path of Gregadoo Creek. The highest concentration of PFHxS+PFOS was 0.12 µg/L at location SW221 (within the dam) collected as part of the additional investigation completed to inform the HHERA. This concentration is greater than the human health screening level for recreational water use.
	Murray Cod Hatchery	Surface water samples were collected form the holding ponds at Murray Cod Hatchery as part of the Defence DSI, and concentrations of PFHxS+PFOS were reported between 2.8 µg/L and 7.04 µg/L. It is understood that the ponds use groundwater to fill up the ponds.

[8] Human Health and Ecological Risk Assessment for the RAAF Base Wagga PFAS Investigation Prepared for: Jacobs Group (Australia) Pty Limited and the Australia Government Department of Defence, 6 November 2018, Environmental Risk Sciences Pty Ltd (EnRiskS).

Table 6.5 Summary of sampling results within the Site

Media	Location/Description	Results
Soil/sediment	Land to the north-west of the Site	The highest concentration of PFHxS+PFOS in sediment was 0.0795 mg/kg, reported at location SD245 in the farm dam to the immediate east of the Gumly Gumly wetland. Two other sediment samples collected as part of the Defence DSI reported concentrations greater than the human health screening level of 0.009 mg/kg (residential land use with access to soil). Concentrations greater than 0.009 mg/kg were reported in soil at four locations as part of the Defence DSI and one location during the HHERA additional investigations, with the highest concentration of 0.116 mg/kg reported in the wetland area.
	Southern portion of the Site	Soil and sediment samples collected from the southern portion of the Site were not reported above the human health screening levels (residential land use with accessible soil).
Groundwater	Northern boundary of Gumly Gumly wetland	PFHxS+PFOS was reported in one groundwater sample at a concentration of 0.1 µg/L, greater than the human health (drinking water) screening level but less than the recreational screening level.
	Murray Cod Hatchery	Groundwater samples from the Murray Cod Hatchery to the north-west of the Site reported concentrations of PFHxS+PFOS between 0.07 µg/L and 2.28 µg/L. As the hatchery is down hydraulic gradient from the Site, groundwater from this area may be representative of groundwater beneath the Site.

6.5 PFAS Management Area Plan (PMAP)

The PMAP was prepared based on the findings of the PSP, Defence DSI and HHERA as well as a Stage 1 Groundwater Modelling Report and Additional Sewer and Stormwater Investigation report (not sighted by EMM in the preparation of this DSI).

The PMAP identified four main sources of PFAS at RAAF Base Wagga:

- the fire training area east of the runway;
- the former fire station;
- the fire extinguisher pad and current fire station; and
- aircraft parking to the south of Building 88.

The PMAP recognised that PFAS is migrating off-base via stormwater discharge and entering Gumly Gumly wetland and subsequently Marshalls Creek. Vertical migration of contaminants into the regional aquifer is also occurring where the surficial geology is thin and permeable. A plume of impacted groundwater around the Gumly Gumly wetland was reported as being identified, with modelling results indicating that this plume would take 55 years to reach water supply bores. Migration of contamination was also noted to a lesser degree to the west of the base via surface water flows in Gregadoo Creek and overland, potentially impacting on farm dams in the southern portion of the Site.

Risks to human health were noted to be limited to high consumers of yabbies and certain fish (carp) in local waterways, but these scenarios were considered unlikely to occur. A risk was also identified if community members used impacted water or soil for drinking water supply or growing home grown produce in the future and if impacted groundwater migrates to drinking supply bores.

The PMAP identified three management zones, with parts of the Site falling within the Surface Water and Groundwater Management zones, as shown on Figure 6.1.

The PMAP identified the following actions:

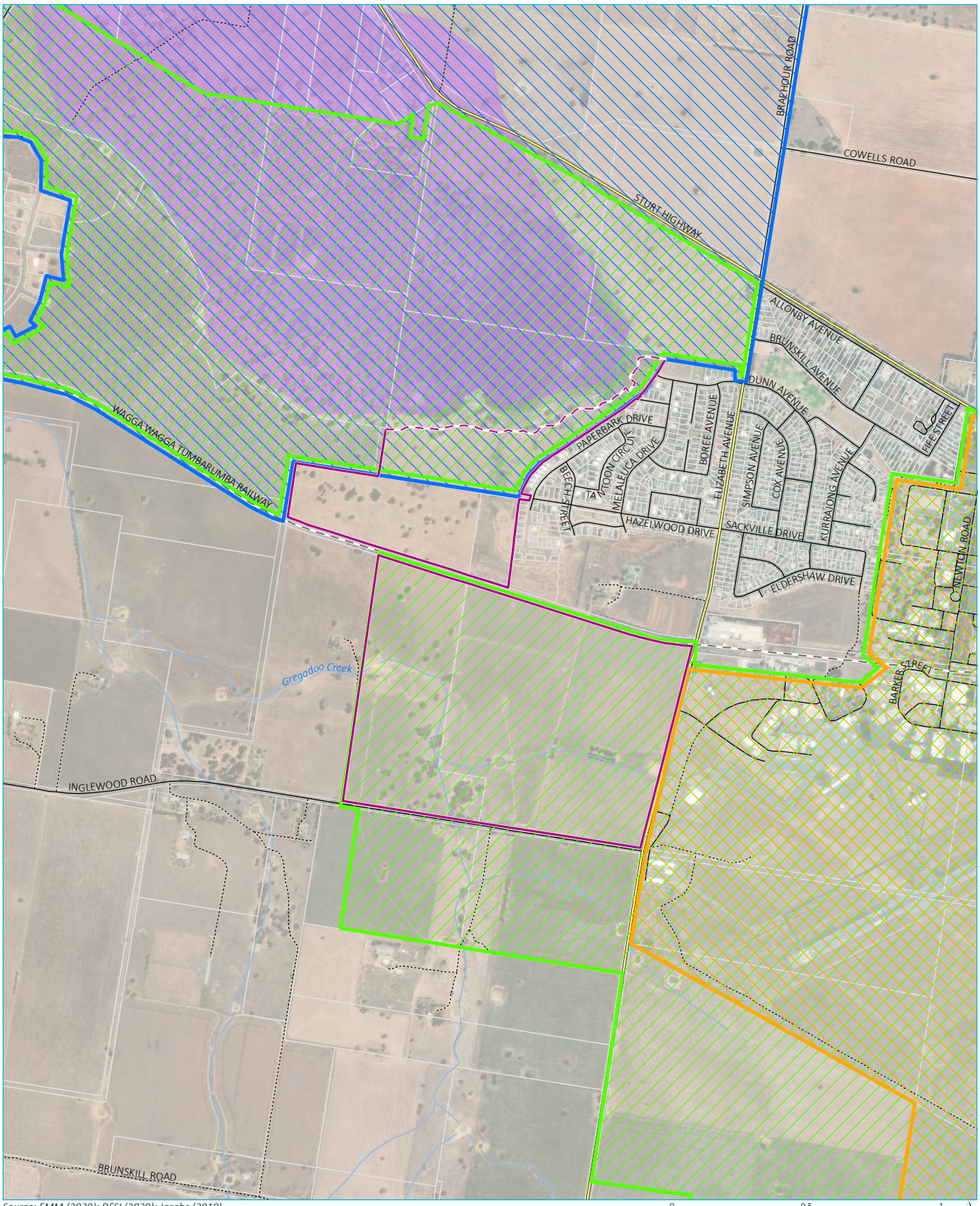
- restrict infiltration of impacted water on the base to sewer and stormwater, including further delineation of impacted soil in the source zone, replacement of PFAS impacted infrastructure and removal of impacted soil/perched groundwater and survey and repair/upgrade of sewer and stormwater pipes and pits in impacted areas;
- support state and local authorities to develop precautionary advice for the surrounding communities in the surface water and groundwater management zone;
- further investigations of the Lachlan Formation and granite groundwater (to the east of the base);
- work with Council to resolve issues at Forest Hill WWTP;
- implement an operational management plan (OMP) to validate the groundwater model, monitor changes in PFAS concentrations in surface water and groundwater and provide data for future management actions, if required; and
- actions aim to reduce PFAS discharges from the base and provide advice to affected communities. Longer term, the aim is to restore environmental values of groundwater.

The PMAP may be reviewed as technologies for the treatment of PFAS evolve, particularly with respect to management options to control contamination from the wetland. At a minimum, the PMAP will be reviewed annually. The PMAP notes it may be used by community and other stakeholders "wishing to understand the potential exposure pathways for PFAS chemicals on and migrating from Defence sites, and the response measures to eliminate or reduce this exposure".

The PMAP further identified that Council may consider notations on Section 10.5 planning certificates for properties inside the management zones and the provision of precautionary advice to those properties. Precautionary advice recommended by the PMAP is summarised below.

Table 6.6 Management zone precautionary advice

Management zone	Objectives of precautionary advice
Surface Water	To restrict use of surface water from farm dams and Marshalls Creek for drinking water, cooking, watering of livestock for home consumption, irrigation of fruit and vegetables for home consumption and watering of chickens where eggs are for home consumption.
Groundwater	To restrict use of groundwater for drinking water, cooking, watering of livestock for home consumption, irrigation of fruit and vegetables for home consumption and watering of chickens where eggs are for home consumption.



Source: EMM (2020); DFSI (2020); Jacobs (2019)

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GDA 1994 MGA Zone 55

N

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KEY

- Project site
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary
- Base management zone
- Surface water management zone
- Groundwater management zone
- Predicted PFAS groundwater plume extent

Management zones

Brunslea Park Forest Hill
Detailed site investigation
Figure 6.1

EMM
creating opportunities

7 Preliminary conceptual site model

Based on the findings of the desk top studies and previous investigations undertaken (by others) on RAAF Base Wagga and in the surrounding area, a preliminary conceptual site model (CSM) was prepared to assist in developing a design for the DSI.

The preliminary CSM has been prepared in the context of the proposed residential land use at the Site and is based on the available information, as summarised above.

7.1 Contaminant sources

7.1.1 PFAS

Table 7.1 outlines the identified sources of PFAS contamination that are known or have the potential to impact on the Site. Potential sources of contamination, or areas of environmental concern (AECs) are shown on Figure 7.1. Other CoPC that may be associated with these sources are discussed in Section 7.1.2.

Table 7.1 PFAS Sources

Potential source	Contaminants of potential concern (CoPC)	Likelihood of contamination/release mechanism
On-site: farm dams and other surface water bodies	PFAS*	**Known** Migration of impacted surface water may have resulted in accumulation of impacted water, sediment and soils in farm dams across the Site.
Off-site: Gumly Gumly wetland	PFAS*	**Known** Investigations completed by Defence have identified PFAS contaminated surface water discharging into the Gumly Gumly wetland to the north west of the Site. Contaminated water can infiltrate the subsurface geology due to higher connectivity in this area, and migrate via overland flow or accumulate in areas of standing surface water.
Off-site: Former bitumen plant and Neptune Plane FTA	PFAS*	**Potential** When active (estimated to be in the 1970s and 1980s, based on historical aerial photographs), surface water run-off from this feature is likely to have migrated onto the Site via drainage networks. Residual contamination may continue to impact surface water quality.
Off-site: Former landfilling area (RMV0092) and Buried waste area (NSW1099)	PFAS*	**Potential** Impacted perched water may discharge into surface water during times of heavy rainfall and subsequent overland flow. The Defence DSI indicated limited connectivity between perched water in landfill areas and underlying groundwater in the Lachlan Formation.

Table 7.1 PFAS Sources

Potential source	Contaminants of potential concern (CoPC)	Likelihood of contamination/release mechanism
Off-site: Stormwater and sewer infrastructure	PFAS*	**Known** Stormwater discharging through RAAF Base Wagga stormwater and sewer networks may become, or be further impacted by residual contamination in soil, sludge and concrete infrastructure. Stormwater from a large portion of the base discharges directly into the Gumly Gumly wetland through the drainage canal at the northern boundary of the Site.
Off-site: Forest Hill rural fire services	PFAS*	**Potential** Surface water drainage from the Forest Hill Rural Fire Brigade site may migrate onto the Site through stormwater drainage networks. The nature and extent of PFAS contamination at the rural fire brigade property is unknown, however, it is understood that AFFF was stored at this facility.

* Other CoPC that may be associated with these sources is discussed in Section 7.1.2.

7.1.2 Conventional contamination

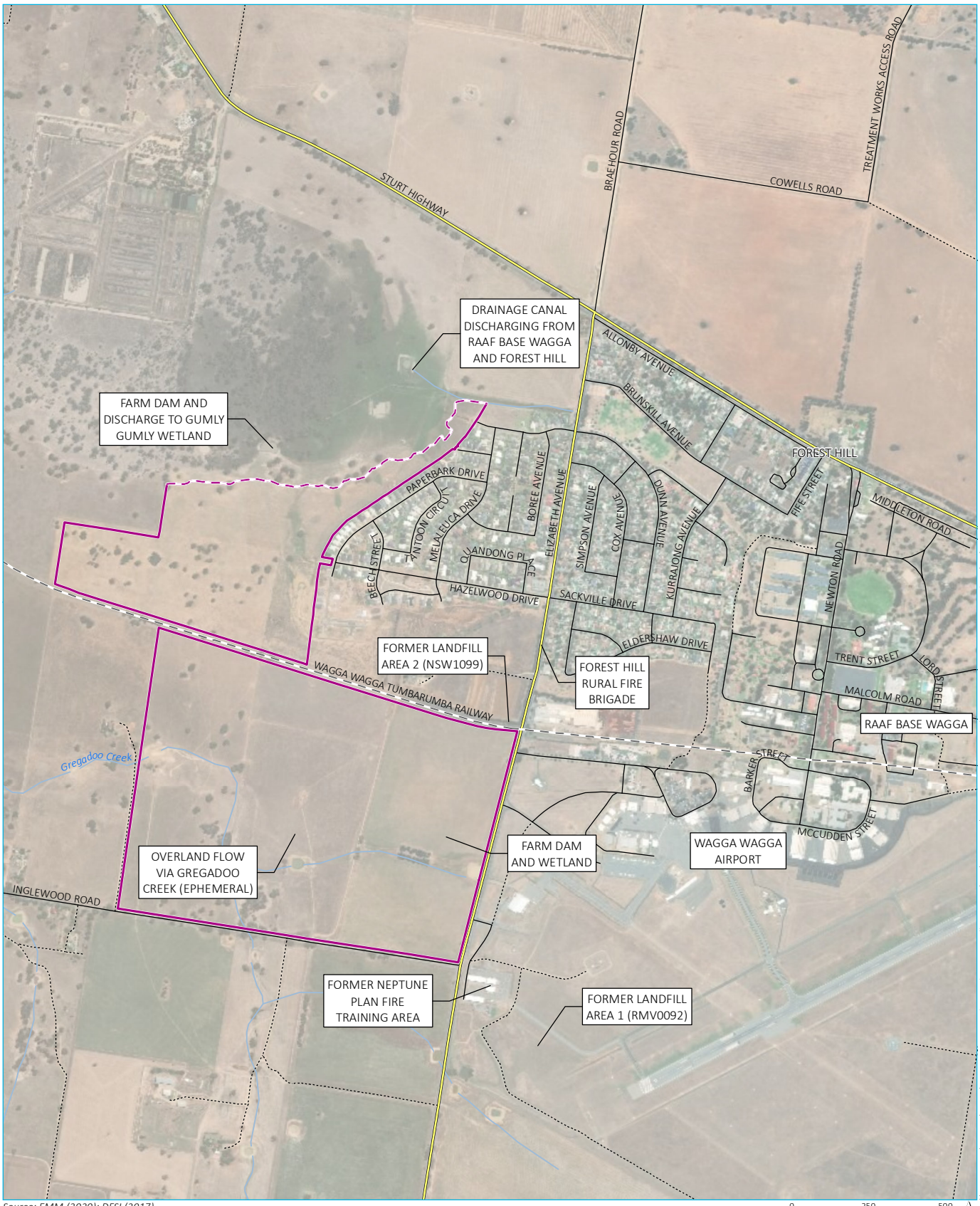
Based on the information available, potential sources of contamination other than PFAS are summarised in Table 7.2.

Table 7.2 Potential contaminant sources and CoPC

Source	CoPC	Likelihood of contamination/release mechanism
On-site: Agricultural activities	Pesticides, herbicides, metals	**Potential** The Site has been used for agricultural purposes since land was granted in the early 1900s and the use of herbicides and pesticides cannot be precluded.
On-site: Storage of fuels/chemicals on-site	Petroleum hydrocarbons	**Unlikely** No storage of fuels and/or chemicals was observed at the Site. Storage of chemicals or fuels at the farm buildings to the immediate east of the Site would be unlikely to have a widespread impact.
On-site: Imported fill	Asbestos, metals	**Unlikely** Based on Site observations, dams and other features at the Site are likely to have been constructed using soil from the Site. However, the potential for fill materials to have been imported to the Site for earthworks, or illegally dumped on the Site, cannot be precluded.

Table 7.2 Potential contaminant sources and CoPC

Source	CoPC	Likelihood of contamination/release mechanism
Off-site: RAAF Base Wagga – landfill areas, fuel/chemical storage, hazardous building materials	Petroleum hydrocarbons, heavy metals, polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), chlorinated hydrocarbons (CHCs), pesticides, asbestos	**Potential** The RAAF Base Wagga Factsheet indicates that conventional contamination has been reported on-base and some remediation to support new development has been completed. The nature and extent of contamination is unknown, including if off-base impacts were assessed. Given that potential pathways for PFAS contamination have been identified between the base and the Site, the potential for conventional migration to have migrated off-base in the same manner and impacted on the Site cannot be precluded.
Off-site: Former bitumen plant	Petroleum hydrocarbons, PAHs	**Potential** The former bitumen plant was located near the eastern boundary of the Site and surface water runoff from this area may have migrated onto the Site. Leaching of contaminants subsequent off-base migration is also possible.
Off-site: Ausply timber mill	Petroleum hydrocarbons	**Potential** The Ausply facility operates under a NSW EPA licence and research for this DSI did not indicate any licence breaches, clean-up notices etc. that would indicate the likelihood of contamination that may impact on the Site. Nevertheless, based on the length of time the factory has operated (from at least 1971), activities undertaken and proximity to the Site, the potential for contamination to be present cannot be precluded.
Off-site: stormwater and sewer infrastructure	Petroleum hydrocarbons, metals, pesticides, herbicides, PCBs, PAHs, CHCs	**Potential** In addition to the migration of PFAS contamination, discharge from stormwater networks onto the Site may support the migration of other contaminants.



Source: EMM (2020); DFSI (2017)

0 250 500 m

GDA 1994 MGA Zone 55

N

KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line

Potential sources of contamination and areas of environmental concern

Brunslea Park Forest Hill
Detailed site investigation
Figure 7.1

EMM creating opportunities

7.2 Pathways

The principal transport pathway for PFAS contamination was identified as surface water flow, in the drainage canal at the northern boundary of the Site and, to a lesser extent, overland flow and surface water in Gregadoo Creek in the southern portion of the Site.

Based on the findings of the Defence investigations, groundwater is generally not considered to provide a transport pathway for contamination at the RAAF Base due to regional geological conditions. Geology beneath the RAAF Base and the Site was found to comprise of two alluvial units (the upper Cowra Formation and lower Lachlan Formation) overlying granite bedrock. Perched water in the Cowra Formation was encountered at generally less than 12 m bgl and was found to be discontinuous. Several groundwater monitoring wells installed by Defence in this geological unit produced insufficient water for sampling. Groundwater in the Lachlan Formation was encountered at more than 20 m bgl, although in some locations, standing water levels (SWLs) rose following monitoring well installation due to hydrostatic pressure in the confined aquifer.

The Cowra Formation comprises silts and clays with some sand and gravel lenses, while the Lachlan Formation is dominated by sands and gravels with some clay bands. The thickness of each unit varies and there is no clear boundary between the two. The Cowra Formation was found to become thinner towards the Murrumbidgee River, to the north-west of the Site. The Lachlan Formation contains a productive aquifer and is used as a drinking water supply (Riverina Water County Council East Wagga Borefield is located approximately 7 km north-west of the Site). Due to the dense high plasticity clays in the Cowra Formation near the RAAF Base, this formation was considered to act as an impermeable confining layer, limiting vertical migration of contamination from surface sources to the regional aquifer.

However, in the Gumly Gumly Wetland and in the vicinity of the Murray Cod Hatcheries to the north-west of the Site, greater connectivity between the alluvial units were reported, with PFAS contamination recorded in groundwater in the underlying Lachlan Formation in these areas. It was inferred in the Defence DSI that this was caused by the transport of contamination in surface water from the base of the wetlands, and subsequent vertical migration where Cowra deposits are thinner and more sand dominated. As a result, vertical migration of contaminants in surface water into the regional aquifer in the vicinity of Gumly Gumly wetland was identified as a potential complete contaminant pathway.

Based on the findings of the HHERA, direct contact with PFAS contaminated soils, sediment or water was not considered to present an unacceptable risk to human health. Potential exposure pathways were identified as ingestion of contaminated water or homegrown meat, eggs, fruit and vegetables where contaminated water has been used for irrigation or contaminated soil used as a growing medium.

The HHERA also identified exposure pathways for terrestrial and aquatic ecology, mainly for higher order consumers, ie birds and mammals through the consumption of lower order species from contaminated areas.

Pathways for conventional contamination are considered to be consistent with those for PFAS impacts, with surface water via drainage channels and overland flow is likely to be the predominant contaminant pathway. There is also potential for migration of volatile contaminants and subsequent vapour accumulation and inhalation.

7.3 Receptors

Receptors of PFAS and conventional contamination comprises of Site users, including construction/maintenance personnel, residential users with high consumption rates of certain fish and shellfish from surface water on-site and within the local aquatic ecology.

In the context of the proposed residential development, Site residents could be sensitive receptors under the scenarios identified in the HHERA and described above, for example, consumption of home-grown produce if grown in or watered with contaminated media or consumption of fish or shellfish from within the Gumly Gumly wetland or its tributaries. It is noted that access to contaminated water would either be via use of surface water (such as dams used for irrigation) or by installing a groundwater bore in areas where vertical connectivity between surface water and groundwater is occurring. This is considered to be limited to the north-western extent of the Site. It is noted that the Defence PMAP did not indicate that the groundwater contamination plume encroached within the boundaries of the Site (refer to Figure 6.1)

Inhalation of volatile contaminants, dust or fibres may also present an exposure scenario based on possible contaminants sources near the Site, such as the Ausply factory.

7.4 Preliminary CSM

Table 7.3 provides an assessment of linkages between contaminant sources, pathways and sensitive receptors while Figure 7.2 shows a graphical representation of the preliminary CSM.

Overall, migration of PFAS impacted surface water onto the Site from off-site sources, primarily associated with RAAF Base Wagga, is known to have resulted in PFAS impacts to surface water at the Site and regional groundwater (in the vicinity of the Gumly Gumly wetland where connectivity between the upper and lower aquifers was established), and may have impacted soils and sediment where surface water has accumulated and/or infiltrated the Site surface. Pathways and receptors for conventional contamination are likely be consistent with PFAS contamination with surface water the predominant migration pathway.

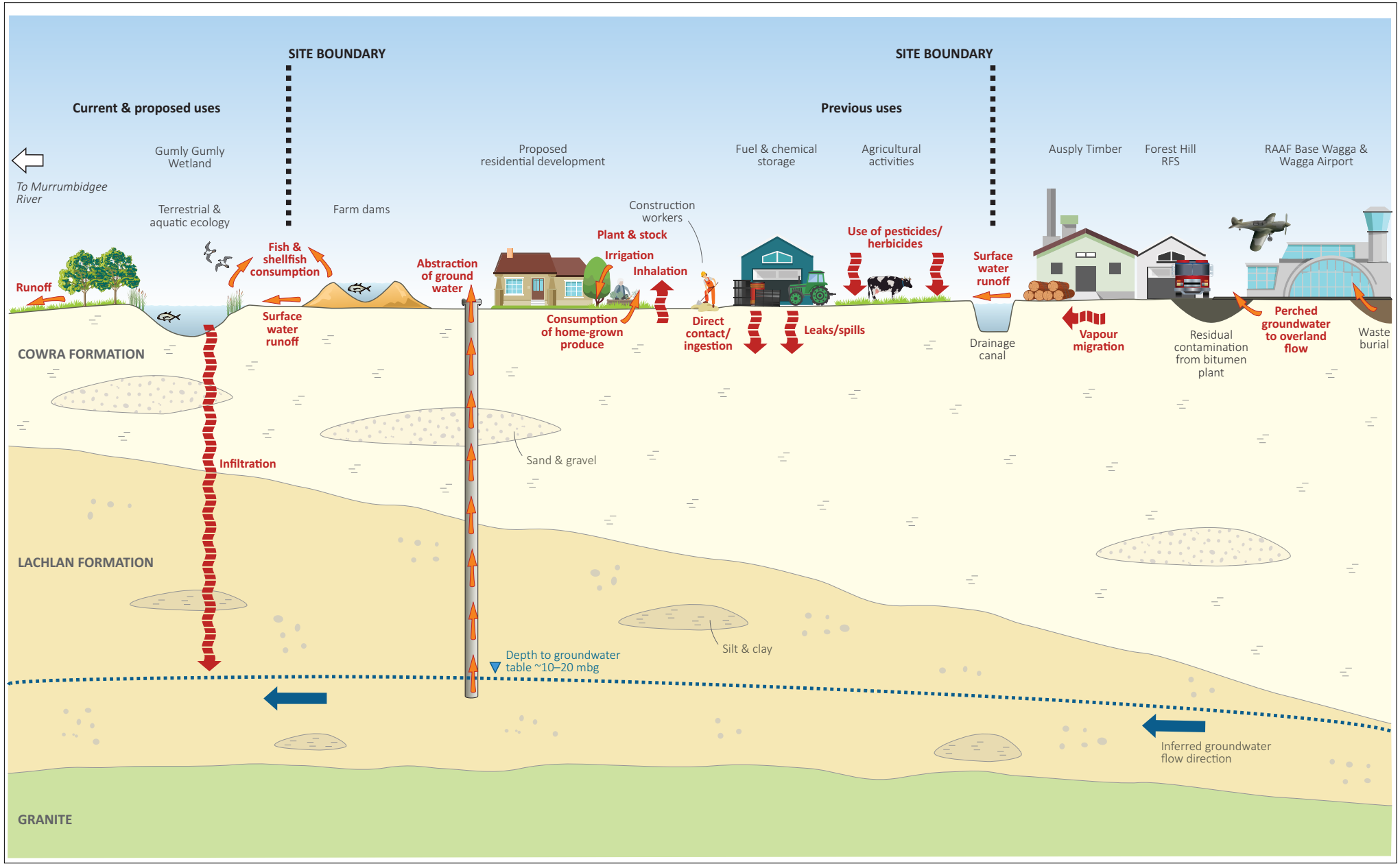
The DSI has been designed to assess where complete or potentially complete source-pathway-receptor linkages have been identified.

Table 7.3 Source-pathway-receptor linkages

Source	Pathway(s)	Receptor(s)	SPR linkages complete, without mitigation/management measures?
Surface water in farms dams, creeks and other surface water accumulations at the Site	Direct contact with or ingestion of impacted surface water, soil and sediment	• Site users, including construction workers	Yes
		• Future residents	Yes
	Ingestion of homegrown produce where impacted water is used for irrigation	• Future residents	Yes
	Infiltration to regional aquifer	• On-site and down gradient users of regional groundwater	Potential, in the north-western portions of the Site only
	Uptake or ingestion of contaminated surface water	• Terrestrial ecology	Yes
		• Aquatic ecology	Yes
	Surface water flow overland and via Marshalls Creek	• Downgradient users of surface water	Yes
		• Aquatic ecology	Yes
		• Terrestrial ecology	Yes

Table 7.3 Source-pathway-receptor linkages

Source	Pathway(s)	Receptor(s)	SPR linkages complete, without mitigation/management measures?
Regional groundwater, known to be hydraulically connected to surface water to the north-west of the Site	Direct contact with impacted groundwater	• Site users, including construction workers	Unlikely, due to depth of groundwater
		• Future residents	Potential, in the north-western portion if impacted groundwater encroaches on the Site and is abstracted for domestic use
	Ingestion of abstracted groundwater	• Future residents	Potential, in the north-western portions of the Site
		• Down-gradient users	Potential
	Uptake or ingestion of contaminated water	• Terrestrial ecology	Potential
		• Aquatic ecology	Potential
Impacted soil or sediment	Direct contact or ingestion	• Site users, including construction workers	Yes
		• Future residents	Potential
	Ingestion of homegrown produce grown in impacted soil	• Future residents	Potential
	Inhalation of volatile contaminants	• Site users, including construction workers	Potential
		• Future residents	Potential
	Runoff of soil or sediment during periods of high water flow	• Down gradient residents	Potential
		• Terrestrial ecology	Potential
		• Aquatic ecology	Potential



Preliminary Conceptual Site Model

Ashfield Wakehurst Development Pty Ltd c/: Yarraman Developments Pty Ltd
Detailed Site Investigation, Brunslea Park
Figure 7.2

EMM
creating opportunities

8 Data quality objectives and data quality indicators

8.1 Data quality objectives

To ensure that data of adequate type and reliability are collected and assessed for the DSI, the seven-step Data Quality Objective (DQO) approach, outlined in the ASC NEPM and endorsed in the NSW EPA Guidelines for the NSW Site Auditor Scheme 3rd Edition (2017), was adopted. The DQOs have set quality assurance and quality control (QA/QC) parameters for the field and laboratory programs to ensure data of appropriate reliability was used to assess the environmental conditions of the Study Area.

Table 8.1 Data Quality Objectives

DQO	Comment
Step 1: State the problem	Wakefield Ashurst intends to develop the Site for residential purposes. To support this development, a rezoning application to Council is required, including a report that demonstrates the Site is suitable, or can be made suitable, for residential land use with gardens/accessible soil. The preliminary CSM (Section 7.4) has identified potentially complete exposure pathways for CoPC, which need to be assessed.
Step 2: Identify the decision(s) to be made	The goal of the DSI is to: • understand current and historical property uses; • confirm potential receptors and pathways; • provide information on contamination (soil, sediment, surface and groundwater) at the Site; • assess whether the Site is likely to be suitable for the proposed land use; and • inform any further work, remediation or risk management required at the Site.
Step 3: Identify inputs to the decision(s)	To inform the assessment required to obtain representative data to meet the objectives of the DSI, various inputs were considered as follows: • approval from stakeholders to undertake the DSI (where required); • appropriate NSW EPA endorsed guideline documents; • appropriately experienced environmental consultants; • field observation of aesthetic impacts or visible areas of potential contamination (e.g. staining, odours, sheen); • preparation of supporting permits and plans; • underground clearance of intrusive investigation locations; • concentrations of contaminants of potential concern (CoPC); • concentrations of hazardous gases at monitoring wells and boreholes [measured using a photoionisation detector (PID)]; • distribution of identified contamination both laterally and vertically; • QA/QC data; • well construction and survey data to metres above Australian Height Datum (m AHD); • field water quality parameters; • meteorological data (temperature/rainfall/barometric pressure); • comparison of concentrations of contaminants relative to relevant screening criteria (Section 9); and • identification of potential receptors and pathways based on delineation of CoPC in the environment from the data collected.

Table 8.1 Data Quality Objectives

DQO	Comment
Step 4: Define the study boundaries	The boundaries of the investigation have been defined as follows: • Spatial boundaries – the lateral assessment is limited to the Site, with conditions inferred between sample locations as shown on in Figure 9.1. • Vertical – soil samples were collected at various depths with the purpose of assessing the vertical extent of impacts. Soil sampling will focus on the shallow subsurface (up to 3 m bgs at the boreholes) considered to be appropriate given the proposed residential land use (maximum excavation depth likely to be no more than 3 m bgl) and likely exposure pathways. Groundwater samples were collected from each borehole location, which were designed to target shallow/perched groundwater in the shallow aquifer within the Cowra Formation (estimated 15–20 m bgl) and deeper groundwater within the Lachlan Formation (maximum proposed depth of 40 m bgs). • Temporal – this investigation is limited to data collected from the DSI sampling program in June 2020 and interpretation of this data with reference to historical data. Any changes to site or environmental conditions since are not part of this investigation.
Step 5: Develop a decision rule	Analytical data was obtained from NATA accredited laboratories and assessed against data quality indicators (DQIs) to confirm reliability of the results. An assessment of data quality is provided in Appendix C. Subject to data being of appropriate quality for use in this DSI, the following decision rules apply: • If the contaminant concentrations were less than the adopted Site assessment criteria (SAC) (Section 8), then potential risks associated with CoPC were considered to be low and unlikely to preclude residential land uses at the Site. • If the concentrations were equal to or greater than the SAC, then further assessment may be required to assess the extent of contamination and potential risks to site users under a residential land use. • Asbestos – was assessed for visible absence/presence in surface soils, in addition to being quantified in soil samples collected. In order to compare the concentration in accordance with adopted SAC from the ASC NEPM.
Step 6: Specify performance or acceptance criteria that the data need to achieve	Acceptable limits on decision errors must be applied based on the DQIs of precision, accuracy, representativeness, comparability and completeness (PARCC). The tolerable limits on decision errors for data that EMM considers acceptable are: • probability that 95% of data satisfied the DQIs, therefore the limit on the decision error is 5% that a conclusive statement may be incorrect; and • a robust QA/QC program was implemented and that appropriate sampling and analytical density for the purposes of the investigations and representative sampling is undertaken. The possible outcome on making an error in the decision is making decisions on unreliable data and consequently making incorrect decisions. This could result in the following outcomes: 1. Possible underestimation (or overestimation) of risk resulting in cost implications for the client. 2. Adoption of inappropriate remediation or mitigation measures for the identified contamination resulting in cost implications for the client. Assessment of the suitability of the data through the assessment of DQIs, including precision, accuracy, representativeness, completeness and comparability in discussed in Appendix C.
Step 7: Optimise the design for collecting data	The collection of data was optimised by the development of an appropriate sampling and analytical strategy. Attainment of the DQOs was assessed by reference to the DQIs, presented in Section 11. Data obtained from historical reviews have been used to inform the data collection design at the Site. As noted in Section 1.2, the Site cover a large area and the investigation has been designed using judgemental sampling to target potential source areas, rather than provide an overview of contamination conditions through the completion of a minimum number of sampling locations to delineate hotspots of a particular size under NSW EPA (1995).

9 Assessment criteria

Laboratory analysis was assessed against Site assessment criteria (SAC), which have been selected based on the proposed residential land use at the Site. The SAC are outlined in Table 9.1 below.

Table 9.1 Site assessment criteria (SAC)

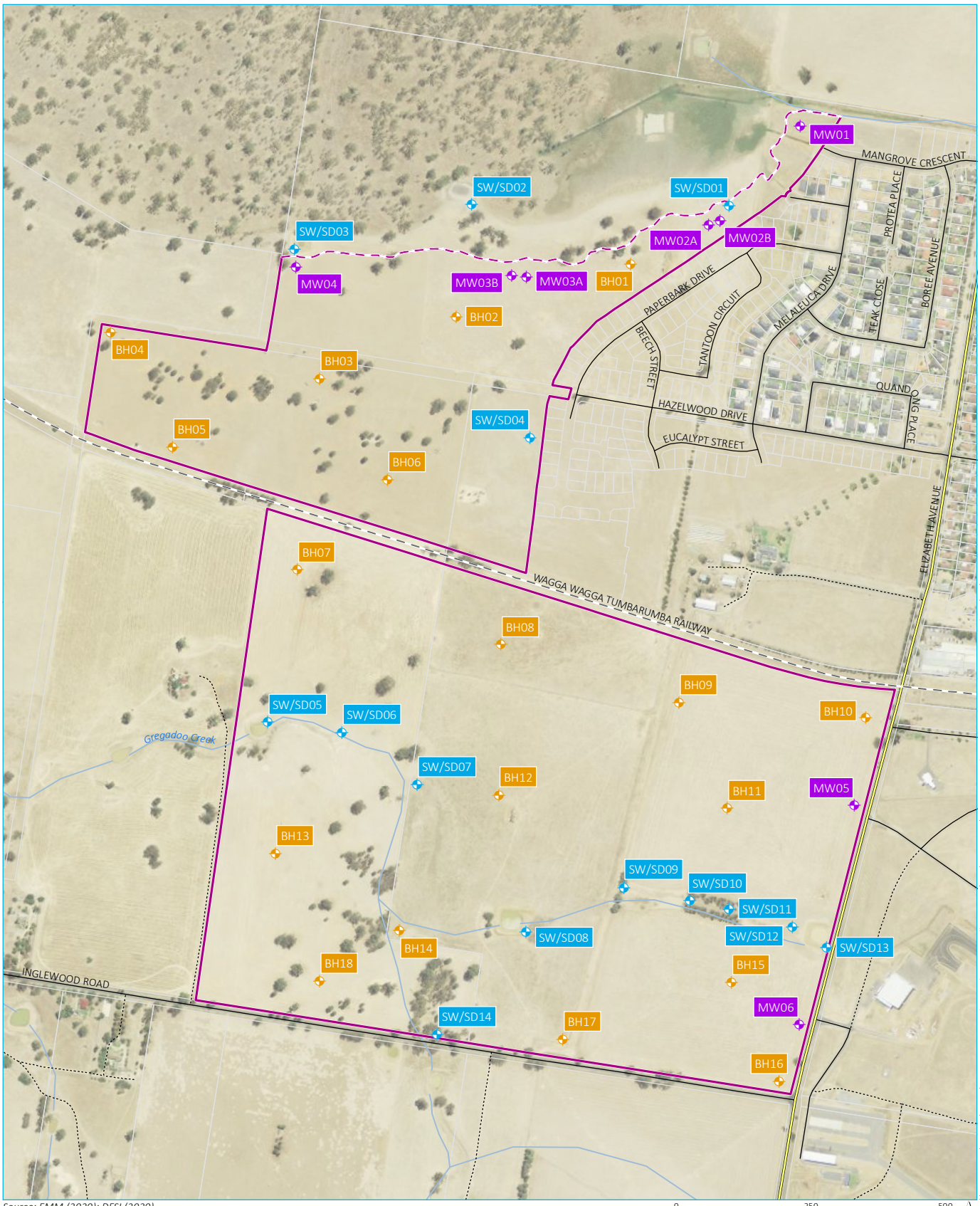
Adopted criteria	Rational for selection
Soil and sediment	
Health Investigation Levels (HILs), Amended ASC NEPM (NEPC, 2013)	The ASC NEPM HILs provides a framework for the use of investigation and screening levels. The framework is applicable for assessing human health risk via all relevant pathways of exposure and covers a broad range of metals and organic substances. The proposed Site land use is low density residential. Thus, the soil and sediment analytical results from this investigation will be compared to the ASC NEPM Residential A – residential with gardens/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), which also includes children's day-care centres, preschools and primary schools.
Health Screening Levels (HSLs), ASC NEPM	The ASC NEPM HSLs for petroleum compounds have been derived through consideration of risks to human health, with the main focus being on the vapour exposure pathway. The HSLs have been calculated using parameters that generally correspond to data available and as such aim to provide levels that are realistic rather than overly conservative. The proposed Site land use is low density residential. Thus, the soil and sediment analytical results from this investigation will be compared to the ASC NEPM Residential A/B. The screening strata will be selected based on the subsurface conditions encountered (likely to be silts and clays). For groundwater and surface water the results will be compared to ASC NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay
Ecological Investigation Levels (EILs) ASC NEPM	The ASC NEPM EILs have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2 m of soil. It is noted that EILs take into consideration the depth of contamination, soil texture and age of the impacts. The proposed Site land use is low density residential. Thus, the soil and sediment analytical results from this investigation will be compared to the guideline for 'urban residential areas and public open space'. As samples within the top 2 m bgl will be analysed, these guidelines have been adopted for this investigation.
Ecological screening Levels (ESLs) ASC NEPM	The ASC NEPM ESLs were developed to be protective of environmental concerns by determining the reasonable maximum exposure from site sources for a range of petroleum hydrocarbon compounds and TRH fractions commonly encountered on contaminated sites and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil and 3 m in arid regions. The proposed Site land use is low density residential. Thus, the analytical results from this investigation will be compared to the ASC NEPM 'urban residential areas and public open space'.

Table 9.1 Site assessment criteria (SAC)

Adopted criteria	Rational for selection
Aesthetic issues	In accordance with the ASC NEPM, the aesthetic state of sites is required to be taken into consideration. Aesthetic issues generally relate to the presence of materials with a negligible risk or non-hazardous inert foreign material in soil or fill resulting from human activity. Sites that have been assessed as being acceptable from a human health and environmental perspective may still contain such foreign material. An assessment of the Site aesthetics requires consideration of the natural state of soil on any given site, and a comparison between it and the soil encountered during investigation works. In particular, soils should not exhibit discolouration (staining), a malodorous nature (odours) or abnormal consistency (rubble and asbestos). As such, aesthetic considerations (odour) will be considered throughout the fieldwork for soil sampling and noted in field notes when observed.
Management Limits, ASC NEPM	The ASC NEPM Management Limits for TRH are applied after the consideration of the relevant HSLs and Ecological Screening Levels (ESLs) as there are a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons. There are Management Limits for specific soil types (coarse and fine) and land uses in the ASC NEPM. The Management Limits avoid or minimise the potential effects of the following and require consideration of site-specific factors to determine the maximum depth to which the limits should apply: • formation of observable light non-aqueous phase liquid; • fire and explosive hazards; and • effects on buried infrastructure, eg penetration of, or damage to, in-ground services by hydrocarbons. The criteria for residential, parkland and public open space are considered relevant for the upper 2 m of soil.
Asbestos Screening Level, ASC NEPM	Asbestos screening levels are presented for asbestos containing material, friable asbestos, and asbestos fines. The proposed site land use is residential, therefore the soil and sediment analytical results from this investigation will be compared to the ASC NEPM Residential A – with gardens / accessible soil.
HILs and ecological direct and indirect exposure, PFAS National Environmental Management Plan (NEMP, 2020)	National guidelines for three PFAS compounds (PFOS, PFHxS and PFOA) are presented in the PFAS NEMP (2020) to protect human health and the environment under different exposure scenarios. Given the adjacent RAAF Base and known PFAS contamination in the region, these guidelines have been considered. HIL-A for Residential with garden/accessible soil land use has been selected as the most appropriate exposure scenario, which is applicable to the Site for its proposed use.
Toxicant default guideline values for sediment quality, Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG)	Default guideline values (DGVs) for toxicants indicate the concentrations below which there is a low risk of unacceptable effects occurring, and should be used, with other lines of evidence, to protect aquatic ecosystems. The DGVs are applicable to sediment samples only.
Groundwater and surface water	
DGVs for Protecting Aquatic Ecosystems (ANZG)	The objective of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality is to provide authoritative guidance on the management of water quality in Australia and New Zealand. The surface water and groundwater analytical results from this investigation will be compared to the ANZG (2018) Freshwater 95% toxicant DGVs.

Table 9.1 Site assessment criteria (SAC)

Adopted criteria	Rational for selection
Australian Drinking Water Guidelines (ADWG)	The ADWG are intended to provide a framework for good management of drinking water supplies that, if implemented, will assure safety at point of use. The proposed Site land use is low density residential. Thus, the surface water and groundwater analytical results from this investigation will be compared to the ADWG 2017 Aesthetic and Health guidelines.
Groundwater investigation levels (GILs) (ASC NEPM)	GILs are provided in the ASC NEPM for the assessment of water quality, based on ANZG and ADWG. In consideration of the Site setting and identified potential exposure pathways, GILs for fresh water and drinking water have been considered in this DSI.
Groundwater HSL for vapour intrusion (ASC NEPM)	As inhalation of vapours was identified as a potential exposure pathway at the Site, groundwater HSLs for vapour intrusion have been considered in this DSI. HSL A & HSL B for low-high residential land use are the most appropriate based on the proposed Site land use.
Human health and Ecological water quality guidelines values (NEMP, 2020)	National guidelines for three PFAS compounds (PFOS, PFHxS and PFOA) are presented in the PFAS NEMP (2020) to protect human health and the environment under different exposure scenarios. PFAS compounds are known to bioaccumulate in the environment and as such a conservative approach has been taken when selecting criteria for comparison against groundwater and surface water results. The following criteria will be applied against the analytical results: • PFAS NEMP 2020 Freshwater 99%; and • PFAS NEMP 2020 Drinking Water. Additionally, the surface water analytical results have also been compared to PFAS NEMP Recreational Water guidelines to account for potential recreational use of surface water bodies such as farm dams.



Source: EMM (2020); DFSI (2020)

0 250 500 m

GDA 1994 MGA Zone 55

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KEY

- Study area
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Sampling locations

- Monitoring well
- Soil bore
- Surface water/sediment

Sampling locations

Brunslea Park Forest Hill
Detailed site investigation
Figure 9.1

EMM
creating opportunities

10 Sampling and analysis

10.1 Sampling rationale

10.1.1 Soil investigation

Soil sampling locations were selected to assess diffuse sources of contamination identified in the preliminary CSM, such as the application of pesticides, and to investigate the potential for PFAS to be present in soil at the Site. Soil samples were collected from twenty four (24) locations, including six (6) monitoring well locations (BH01–BH18 and MW01, MW02A, MW03A, and MW04–MW06), which were advanced to between 2–3 m bgl to be consistent with the depth of excavation likely to be required for residential development.

EMM acknowledges that the number of sampling locations does not comply with the minimum number of sampling locations recommended in NSW EPA (1995), if the Site were to be divided into smaller (up to 5 ha) areas for investigation. However, the proposed investigation is designed to provide general coverage of the Site in consideration of the identified sources of potential contamination (ie relatively consistent CoPC, diffuse contamination sources and pathways primarily associated with surface water migration) and are considered appropriate to meet the project objective of supporting a rezoning application for residential land use.

10.1.2 Groundwater investigation

To assess potential risks to future Site users based on the findings of the preliminary CSM, two potential exposure pathways require investigation:

1. direct contact with groundwater (such as workers' exposure during construction or residents during future development such as installation of a swimming pool). This scenario is limited to shallow/perched water in the Cowra Formation; and

2. contact with groundwater, use of groundwater for irrigation and/or consumption of home grown produce watered with contaminated water. Assessment of deeper groundwater is necessary to assess this exposure scenario as Site users may install bores to abstract water. This scenario was considered to be limited to the north eastern Site area, where hydraulic connectivity between surface water and groundwater was demonstrated by Defence investigations.

To assess both scenarios, monitoring wells were installed to target both shallow (10−15 m bgl) and deep (20−40 m bgl) groundwater units.

Monitoring wells were primarily installed at the north-western boundary of the Site, to target areas where the Cowra Formation deposits are thinner and assess the presence of groundwater contamination associated with hydraulic connectivity in the Gumly Gumly wetland. An additional two groundwater monitoring wells were installed at the eastern Site boundary, adjacent to Elizabeth Avenue. These wells were intended to assess the quality of shallow groundwater migrating onto the Site. On-site migration of contamination in deeper groundwater was not considered a viable pathway, as discussed in Section 7.2.

It is noted that the two groundwater monitoring wells on the eastern Site boundary contained insufficient water for sampling. This indicates that groundwater is limited and/or discontinuous in the shallow Cowra Formation (up to 15 m bgl) and migration of impacted groundwater from off-site in this geological unit is unlikely. This finding is consistent with the findings on the Defence DSI and subsequent investigations, during which several shallow wells were found to be dry and shallow water was reported to be perched and discontinuous.

10.1.3 Sediment and surface water investigation

As migration of potentially impacted surface water was considered a primary pathway for contamination at the Site, sediment and surface soil samples were collected from fourteen (14) locations (co-located, were possible). At SW/SD10, no surface water was present, so no sample was collected at this sampling point. The samples were collected from standing water features and accessible overland drainage lines.

Samples were not collected from the drainage channel at the northern boundary of the Site or water in Gumly Gumly wetland. Contamination in these features has been quantified by Defence and, as the areas are not included in the area for proposed residential rezoning, further data collection and analysis is not considered necessary for the purposes of this DSI.

10.2 Sampling methodology

Field sampling methods were undertaken in accordance with EMM's Standard Operating Procedures (SOPs) for each task. Guidance provided in the following documents was used to inform the sampling program:

- the ASC NEPM;
- Standards Australia (AS4482.1-2005) Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds; and
- Standards Australia (AS 4482.2 - 1999) Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances.

The soil, sediment, surface water and groundwater sample locations are presented in figure 9.1 and a summary of fieldwork methodology is provided in Table 10.1.

Table 10.1 Fieldwork methodology

Activity	Description
Service clearance and utility avoidance	**9 June 2020**
Subcontractor	Wagga Directional Drilling
Scope	EMM undertook a Dial-Before-You-Dig (DBYD) search of the general areas proposed for intrusive investigations. Each soil bore location was scanned by a qualified and Telstra-accredited service locating contractor to ensure the location is free of utilities and services that may be affected by the works.
Rationale	To ensure there is no impact with subservice services during the drilling activities.
Methods	Wagga Directional Drilling undertook the scope using active and passive service location techniques.
Soil investigation	**9 June 2020 – 13 June 2020**
Subcontractor	Numac Drilling
Scope	Soil bores were advanced at 24 locations across the Site (BH01–BH18 and MW01, MW02A, MW03A and MW04–MW06). Six (6) soil bore locations were subsequently advanced for the installation of shallow groundwater monitoring wells (see below). Soil samples were generally collected to a maximum depth of 3.0 m bgl.

Table 10.1 Fieldwork methodology

Activity	Description
Methods	Soil bores were progressed using direct push (Geoprobe) methods to maximum depth of 3.0 m bgl or until refusal. Soil samples were collected using push-tube sampling methods and decanted directly into laboratory supplied sample jars for transport to the nominated laboratories under chilled conditions. Samples were collected from the surface and at 0.5–1 m intervals until completion of the bore. Excess soil generated during the sampling events was collected in drums and stored at the Site for classification and re-use or off-site disposal. At the deep (MW02B and MW03B) groundwater well monitoring locations, soil samples were collected using the sonic core method which is a comparable method to the push tube and prevents the need to change drilling apparatus.
Soil classification and logging	Lithological conditions were logged according to EMM's standard field protocols using the Unified Soil Classification System. Soil classification is based on field observations and only intended to provide a general indication of the soil characteristics encountered. Soil borehole logs are included in Appendix D.
VOC field measurements	During soil sampling, a calibrated photo-ionisation detector (PID) was used to collect volatile organic compound (VOC) field measurements. A sub-sample of soil was placed in a snap-lock bag which was sealed and left for a minimum of five minutes prior to measurements being taken. The PID measurements are detailed on the borehole logs within Appendix D.
Groundwater well installation and development	**9 June 2020 – 13 June 2020**
Subcontractor	Numac Drilling
Scope	Groundwater well installation and development at 8 locations (6 x shallow and 2 x deep).
Methods	Six of the soil bores soil bore locations and two additional locations (8 total) were progressed using a mixture of solid stem auger, sonic and airlift methods until groundwater was encountered. 8 groundwater wells were installed and constructed using 50-mm diameter class PM18 PVC: • Shallow groundwater monitoring wells (MW01, MW02A, MW03A and MW04 – MW06) were advanced to between 10 m bgl and 17.3 m bgl, targeting shallow/perched groundwater in the Cowra Formation. Slotted screens were installed across the standing water level (SWL) or in potential water bearing horizons (ie sandy/gravelly lenses within clay geology). • Deeper groundwater monitoring wells (MW02B and MW03B) were advanced to 35.3 m bgl, with slotted screens installed to target deeper groundwater in the Lachlan Formation. The screens were installed in sand and gravel horizons encountered below the clay-rich layers of the Cowra Formation. A minimum 3 m length of slotted screen was installed in each well. The borehole annulus was filled with a gravel pack to 0.5 m above the slotted screen followed by a 1.0 m bentonite pack. The remaining borehole annulus was filled with grout and capped with a monument stickup. Groundwater well borelogs and well construction diagrams are included in Appendix E and Appendix F, respectively. Each groundwater monitoring well installed was developed using air lift methods and completed by the drillers under supervision of EMM to ensure representative samples were obtained during the Groundwater Monitoring Event (GME). Purged water was collected in drums and stored at the Site for classification and re-use or off-site disposal. Groundwater development forms are included in Appendix G.
Soil classification and logging	As detailed above for soil. Groundwater well logs are included within Appendix E.
VOC field measurements	As detailed above for soil. The PID measurements are detailed on the groundwater well logs within Appendix E.

Table 10.1 Fieldwork methodology

Activity	Description
Water quality measurements	Water quality measurements were recorded during well development. Temperature, pH, redox potential (ORP), electrical conductivity (EC) and dissolved oxygen (DO) field parameters were recorded using a calibrated water quality meter. Water quality parameters are included in the groundwater development forms within Appendix G.
Groundwater level measurement	**15 June 2020**
Scope	Measurement of standing water levels (SWLs) in all groundwater wells.
Methods	The monitoring was conducted using an electronic interface probe and were taken in as close succession as possible between wells. The time of measurement at each bore was recorded and all measurements were taken from the top of the inner uPVC casing, at the same point (a notch, or black mark was placed into the edge of the casing to assure consistency in measurement). The groundwater gauging records are included in Appendix H.
Groundwater Monitoring	**17 June 2020**
Scope	Groundwater sampling of six newly installed wells; MW05 and MW06 were dry and could not be sampled.
Methods	Six groundwater wells were sampled using low flow micro-purge and peri-pump methods. Each well was purged using a QED sample pro pump system or peri-pump to minimise drawdown. Standing water levels (SWLs) were monitored using an electronic water level meter during the purging process to ensure drawdown was minimised. Wells were sampled using dedicated Teflon free HDPE to ensure accurate analysis for PFAS. Additionally, items that were not handled before sample collection or come in contact with the monitoring well or sample containers include aluminium foil, self-sticking notes (post it notes), waterproof paper or labels, Decon90 or detergent and reusable chemical or gel ice packs. The following sampling method was followed as it is applicable for both inorganic and organic analytes: • groundwater samples were collected directly from the discharge line while the pump is operating, if the pumping rate is reduced to less than 1 litre per minute; and • samples were placed into appropriate containers provided by the laboratory. Samples were obtained immediately upon purging the bores or upon recovery of a sufficient sampling volume for low yielding bores. All samples were placed in an insulated rigid container with ice bricks and transported to the analysing laboratory under chain of custody protocol. Crushed ice was wrapped in thick plastic bags and melted ice was emptied regularly to prevent ingress into the samples. Purged waters were collected in drums and stored at the Site for classification and re-use or off-site disposal. Groundwater sampling forms are included within Appendix I.
Water quality measurements	Water quality measurements were recorded during the purging of each well. Temperature, pH, ORP, EC and DO parameters were recorded using a calibrated water quality meter until stable. Water quality parameters are included in the groundwater sampling forms within Appendix I.
Surface water and sediment sampling	**10 – 11 and 16 – 17 June 2020**
Scope	Sampling of 14 co-located surface water and sediment locations. At SW/SD10 only a sediment sample was able to be taken as no surface water was present.
Methods	Sediment samples were collected manually using a trowel and by hand (using fresh nitrile gloves for each sample). Surface water samples were collected manually by hand or an extendable grab-sampling pole directly into the sample bottle. Sampling forms are included within Appendix J.
Soil classification and logging	As per detailed above for soil.

Table 10.1 Fieldwork methodology

Activity	Description
VOC field measurements	As detailed above for soil investigation, taken at SW/SD04, SW/SD05, SW/SD06, SW/SD09, SD10 and SW/SD12. The PID measurements are detailed on the sampling sheets within Appendix J.
Quality assurance/ quality control	**All sampling events**
Sample handling and preservation	Samples were collected immediately and placed into laboratory-supplied jars and stored in an esky with ice prior to and during transit to the laboratory. Samples were transported to the laboratory with accompanying chain of custody (COC) documentation and laboratory provided security seals. Details of the sample transportation and handling can be found on the COC and laboratory documentation provided within Appendix K.
Prevention of cross contamination	Procedures employed to prevent cross contamination included: • The trowel, water quality meter and pump equipment were decontaminated between each location as follows: – wipe the equipment (the length that comes into contact with the media) using disposable alcohol wipes. Dispose of the alcohol wipes into a contaminated waste bag; – empty pump bladder and leftover groundwater in wastewater container using a funnel; – wash the equipment using a scrubbing brush in a bucket with a solution of potable water and detergent (phosphate free and suitable for PFAS sampling, eg Liquinox); – rinse the equipment with potable water in another bucket; – final rinse of all apparatus using deionised water in a spray bottle/bucket or directly from the deionized water container; and – the wash solution needs to be renewed when the decontamination process becomes ineffective, eg product on the probe after rinsing or sheen in the wash solution buckets. • Disposable gloves were replaced between each soil sample collected.

10.3 Laboratory analysis

All samples were transferred to National Association of Testing Authorities (NATA) laboratories under chain of custody (CoC) conditions. Select samples for quality assurance purposes were taken to a secondary laboratory. Nominated laboratories for this DSI are:

- Australian Laboratory Services (ALS) – primary laboratory; and
- Envirolab Services (Melbourne) – secondary laboratory.

For groundwater, surface water and sediment, only one sample was collected at each location, therefore every primary sample was analysed. For soil, at least two samples were selected for analysis from each location based on location, rationale for collection and field observations (such as indicators of contamination).

Based on previous investigations in the area and the outcomes of the preliminary CSM, the analytical suite shown in Table 10.1 was adopted for this DSI. Some modifications to the number of samples outlined in the SAQP[9] and the final number and suite of analysis were made, due to limitations in sample media (surface water) as well as observations made by the field team on-site (refer to notes following Table 10.). Four sediment samples were not analysed for PFAS as intended due to an error in completing the chain of custody (CoC) documents.

[9] (EMM) Sampling Analysis and Quality Plan June 2020

Table 10.1 Analytical suite and number of samples

CoPC	Groundwater	Surface water	Sediment	Soil
PFAS	6 primary samples	13 primary samples	10 primary samples	30 primary samples
Total Recoverable Hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN)	6 primary samples	13 primary samples	14 primary samples	47 primary samples
Polycyclic Aromatic Hydrocarbons (PAHs)	4 primary samples	13 primary samples	14 primary samples	47 primary samples
Organochlorine/ organophosphate pesticides (OCP/OPP)	4 primary samples	13 primary samples	14 primary samples	46 primary samples
Phenoxyacid herbicides	4 primary samples	6 primary samples	7 primary samples	12 primary samples
Heavy metals	6 primary samples	13 primary samples	14 primary samples	47 primary samples
Polychlorinated biphenyls (PCBs)	2 primary samples	4 primary samples	4 primary samples	12 primary samples
Chlorinated hydrocarbons (VCH)	2 primary samples	4 primary samples	4 primary samples	12 primary samples
Asbestos	N/A	N/A	2 primary samples	10 primary samples

11 Results

11.1 Field investigation

11.1.1 Soil

The soil profile encountered during investigations at the site is summarised in Table 11.1 below. Soil borehole logs are included in Appendix E.

Table 11.1 Soil profile

Lithology	Approximate Depth (mbgl)	Description
Clayey SILT	Surface to 0.4	Clayey SILT: brown, fine, and soft silts with low plasticity brown clay, dry. No odour, no staining
Silty CLAY	0.4 to 9.0	Silty CLAY: low plasticity clay, brown, very stiff/firm, dry. No odour, no staining
CLAY	9.0 to 14.0	CLAY: medium plasticity, brown/orange, stiff, dry. No odour, no staining
SAND/Gravelly SAND	11.0 to 14.0	Gravelly SAND: fine to medium grained sand, brown. Fine to medium grained gravels. No odour, no staining
Interbedded CLAY and SAND	14.0 to 26.0	CLAY: high plasticity, brown. SAND: medium to coarse grained, grey/brown No odour, no staining
SAND/Sandy GRAVEL	26.0 to 35.3 (end of BH)	Sandy GRAVEL: medium grained gravel, grey. Medium to coarse grained sands. No dour, no staining.

The geology encountered within the eighteen soil boreholes was comparable, with very little variation in the depth of the uppermost silty clay unit. The eight monitoring wells showed more variation in lithological unit depths from 3 m bgl to the termination of each monitoring bore. As noted in the Defence DSI, the boundary between the Cowra Formation and Lachlan Formation in this part of the Site was not distinct, with increasing sand and gravel content observed from around 11 m bgl.

Water was not encountered in the monitoring wells installed at the eastern Site boundary (MW05 and MW06) to depths of 15 m bgl. In the north-eastern portion of the Site, water bearing sand was generally encountered between approximately 11.0−14.0 m bgl followed by interbedded sands, gravels, and clays to 26.0 m bgl. A second water bearing unit composed of sands and gravels was encountered at 26.0m to the end of the investigation depth (35.3 m bgl). No distinct dry or confining layers were encountered between these aquifers, which is consistent with the Defence DSI that concluded there was hydraulic conductivity between water bearing geology in the Gumly Gumly wetland and the surrounding areas. This is further evidenced by the standing water levels and groundwater parameters recorded during the GME (refer Section11.1.3).

No visual or olfactory signs of contamination and/or asbestos were observed in the soil profile. The PID results from field screening of soil samples were between 0.0 and 1.3 parts per million (ppm), indicating negligible to very low volatile contaminant concentrations/background levels.

11.1.2 Tip

During the soil sampling program EMM observed a tip/dump area located in the southern central portion of the Site (Figure 1.2). The landfill extends approximately 30 m in a north – south orientation and is approximately 5 m wide and 3 to 4 m deep. The tip appears to have been excavated artificially and is not located in a natural depression, gully or surface water flow pathway. The tip has been used to dump a variety of wastes including (but not limited to):

- multiple 44 gallon drums (unknown contents);
- a number of drums containing petrol, pesticides, machinery oils, hydraulic fluid and unknown oils;
- general mixed household waste including bed mattresses, cupboards and other furniture, toys and bicycles, clothing, washing and drying machines and kitchen appliances;
- building and demolition material including scrap timber, brick and rubble, fill material, scrap metal, tin and steel; and
- a number of dead animal carcasses including sheep and cattle.

Details of this area have been included in an EMM site inspection form which is included in Appendix M. Sampling location BH12 was located in the vicinity of the tip area to assess potential contamination impacts, with sampling and analytical results discussed in Section 11.2.

11.1.3 Groundwater

Results from groundwater gauging completed prior to sampling are shown in Table 11.2. Groundwater sampling field forms are included in Appendix I.

Table 11.2 Groundwater well gauging

Well ID	Total well depth	Stabilised depth to water	Top of casing	Groundwater depth	PID well head reading	Well comments
Units	*m bgl*	*m bgl*	*m AHD*	*m AHD*	*ppm*	-
MW01	10.873	9.090	185.033	175.943	0.2	Monument
MW02A	18.322	15.470	185.597	170.127	0.8	Monument
MW02B	33.943	15.001	185.087	170.086	0.2	Monument
MW03A	16.955	15.205	185.106	169.901	1.2	Monument
MW03B	36.477	15.075	184.912	169.837	13.6	Monument
MW04	15.974	14.941	184.604	169.663	0.2	Monument
MW05	15.992	ND	211.659	ND	0.1	Monument, dry
MW06	15.981	ND	210.892	ND	0.0	Monument, dry

The similar SWLs recorded in shallow and deep wells indicated connectivity between the water bearing geological units in the north-west portion of the Site.

Inferred groundwater flow direction is difficult to assess based on the results obtained, although it is noted that the groundwater gradient appears to slope downwards towards MW04, which is located at the north-western corner of the Site closest to the Gumly Gumly wetland. This appears consistent with the Defence DSI and subsequent investigations, which suggested a groundwater flow direction to the north-west.

Groundwater quality field parameters collected during the sampling event are shown below in Table 11.3. Groundwater sampling field forms are included in Appendix I.

Table 11.3 Groundwater quality field parameters

Point ID	Temperature	pH	EC	DO	ORP
Units	*°C*		*µs/cm*	*mg/L*	*mV*
MW01	15.6	7.77	2398	3.70	139.1
MW02A	18.4	7.06	769	1.53	54.0
MW02B	19.1	8.70	626	1.76	91.0
MW03A	18.8	7.11	1169	3.50	94.1
MW03B	18.4	7.06	1297	0.99	38.7
MW04	17.7	6.67	3791	5.48	113.8
MW05			Dry		
MW06			Dry		

Notes: EC – electrical conductivity, DO – dissolved oxygen. ORP – oxidation reduction potential

11.2 Analytical results

11.2.1 Soil

A minimum of two samples per borehole submitted for laboratory analysis for selected CoPC. The laboratory analytical results are presented in Appendix L and laboratory certificates of analysis are included in Table 11.4.

There were no exceedances of the adopted SACs across all soil samples analysed as summarised in Table 11.4.

Table 11.4 Summary of soil analytical results

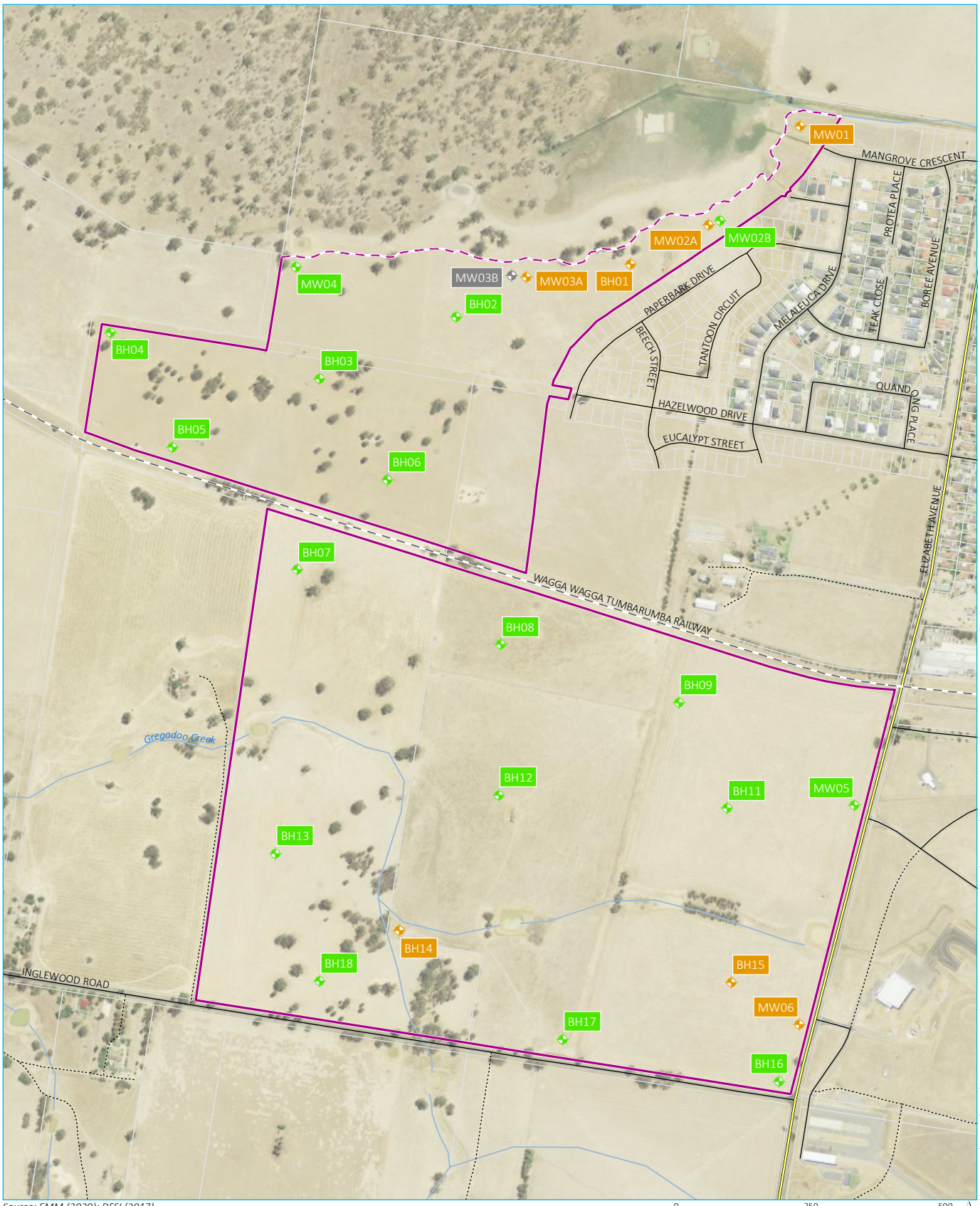
Analytes	Results
Asbestos	No asbestos detected in all samples analysed.
BTEXN	Less than laboratory limits of reporting (LOR) in all samples analysed, less than SAC.
OCP/OPP	Less than LOR in all samples analysed, less than SAC.

Table 11.4 Summary of soil analytical results

Analytes	Results
Metals	Greater than the LOR for the following analytes: • **arsenic** in 9 samples (concentrations between 5 mg/kg and 8 mg/kg); • **chromium (III+VI)** in 47 samples (concentrations between 11 mg/kg and 58 mg/kg); • **copper** in 45 samples (concentrations between 5 mg/kg and 25 mg/kg); • **lead** in 47 samples (concentrations between 5 mg/kg and 20 mg/kg); • **nickel** in 47 samples (concentrations between 4 mg/kg and 32 mg/kg); and • **zinc** in 47 samples (concentrations between 6 mg/kg and 34 mg/kg). All results were less than the SAC
PFAS	Greater than the LOR for the following analytes: • Perfluorooctanesulfonic acid (PFOS) in 8 samples (concentrations between 0.0002 mg/kg and 0.0042 mg/kg); and • Perfluorohexane sulfonic acid (PFHxS) in 2 samples (concentrations of 0.0005 mg/kg). All results were less than the adopted SAC of 0.01 mg/kg for the Sum of PFOS and PFHxS.
TRH	Less than LOR in all samples, less than SAC.
TPH	Greater than the LOR for C_{10}-C_{14} in six samples (concentrations between 50 mg/kg and 60 mg/kg). There are no SAC for TPH fractions. However, the results are less than the TRH SAC of 1,000 mg/kg (HIL) and 120 mg/kg (ESL) for similar fractions (C_{10}–C_{16}).
PAH	Less than the LOR in all samples analysed, less than SAC.
CHC	Less than LOR in all samples analysed, less than SAC.
Phenoxy Herbicides	Less than LOR in all samples analysed, less than SAC.
PCB	Less than LOR in all samples analysed, less than SAC.

Notes: BTEXN – Benzene Toluene Ethylbenzene Xylene Naphthalene, OCP/OPP - Organochlorine Pesticides/Organophosphorous Pesticides, PFAS - Per- and polyfluoroalkyl substances, TRH – Total Recoverable Hydrocarbons, TPH – Total Petroleum Hydrocarbons, PAH – Polycyclic Aromatic Hydrocarbons, CHC – Chlorinated Hydrocarbons, PCB – Polychlorinated Biphenyls

Soil results are shown on Figure 11.1.



Source: EMM (2020); DFSI (2017)

0 250 500 m

GDA 1994 MGA Zone 55

N

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KEY

- Project site
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Soil sample results

- Below LOR
- Below adopted guidelines
- Not sampled

Soil results

Brunslea Park Forest Hill
Detailed site investigation
Figure 10.1

EMM creating opportunities

11.2.2 Groundwater

A total of six primary samples (one per location, excluding MW05 and MW06, which were dry) and two duplicate samples were submitted for laboratory analysis for CoPC associated with the identified sources of potential contamination. The laboratory analytical results are presented in Appendix L and laboratory certificates of analysis are included in Appendix K.

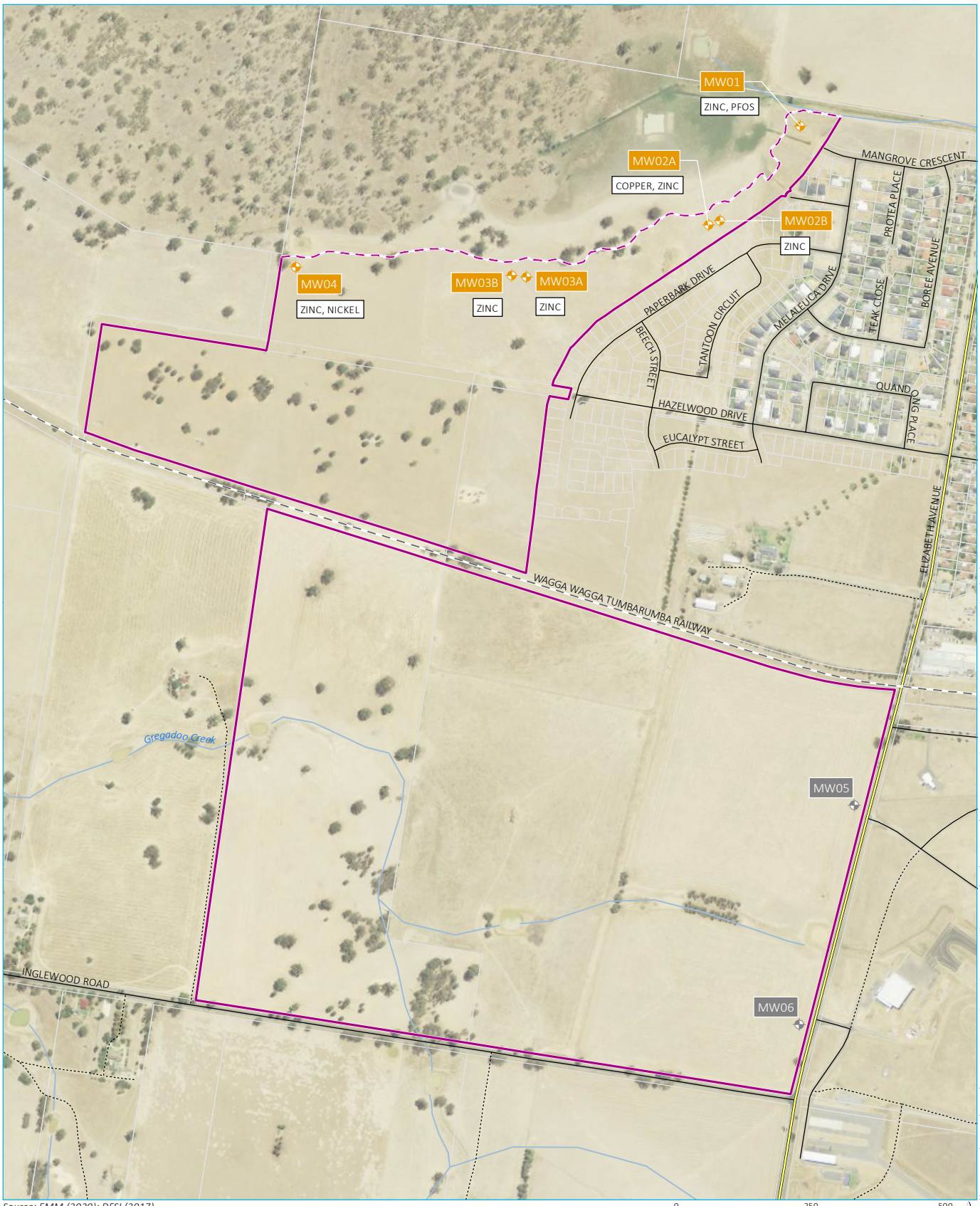
Exceedances of the adopted SAC are presented in Table 11.5 below.

Table 11.5 Summary of groundwater SAC exceedances

Analyte	Adopted criteria	SAC (mg/L)	Location	Concentration (mg/L)
Copper (filtered)	ANZG (2018) Freshwater 95% toxicant DGVs	0.0014	MW02A	0.018
Zinc (filtered)	ANZG (2018) Freshwater 95% toxicant DGVs	0.008	All locations (MW01, MW02A, MW02B, MW03A, MW03B, MW04)	Concentrations ranging from 0.009 mg/L to 0.515 mg/L
Nickel (filtered)	ADWG 2017 Health	0.02	MW04	0.248
PFOS	PFAS NEMP 2020 Freshwater 99%	0.00000023	MW01	0.000003*

* the LOR for PFOS of 0.000002 mg/L is greater than the SAC for freshwater protection of 99% of species. As noted in the PFAS NEMP, some agencies adopt a 'detect' threshold rather than a quantified measurement due to the low level.

Groundwater results are shown on Figure 11.2.



Source: EMM (2020); DFSI (2017)

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KEY

- Project site
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Groundwater sample results

- Above ecological SAC
- Not sampled
- XXX Contaminants above SAC

Groundwater results

Brunslea Park Forest Hill
Detailed site investigation
Figure 10.2

EMM creating opportunities

11.2.3 Surface water

A total of 13 primary surface water samples were submitted for laboratory analysis for CoPC associated with the identified source of potential contamination. The laboratory analytical results are presented in Appendix L and laboratory certificates of analysis are included in Appendix K.

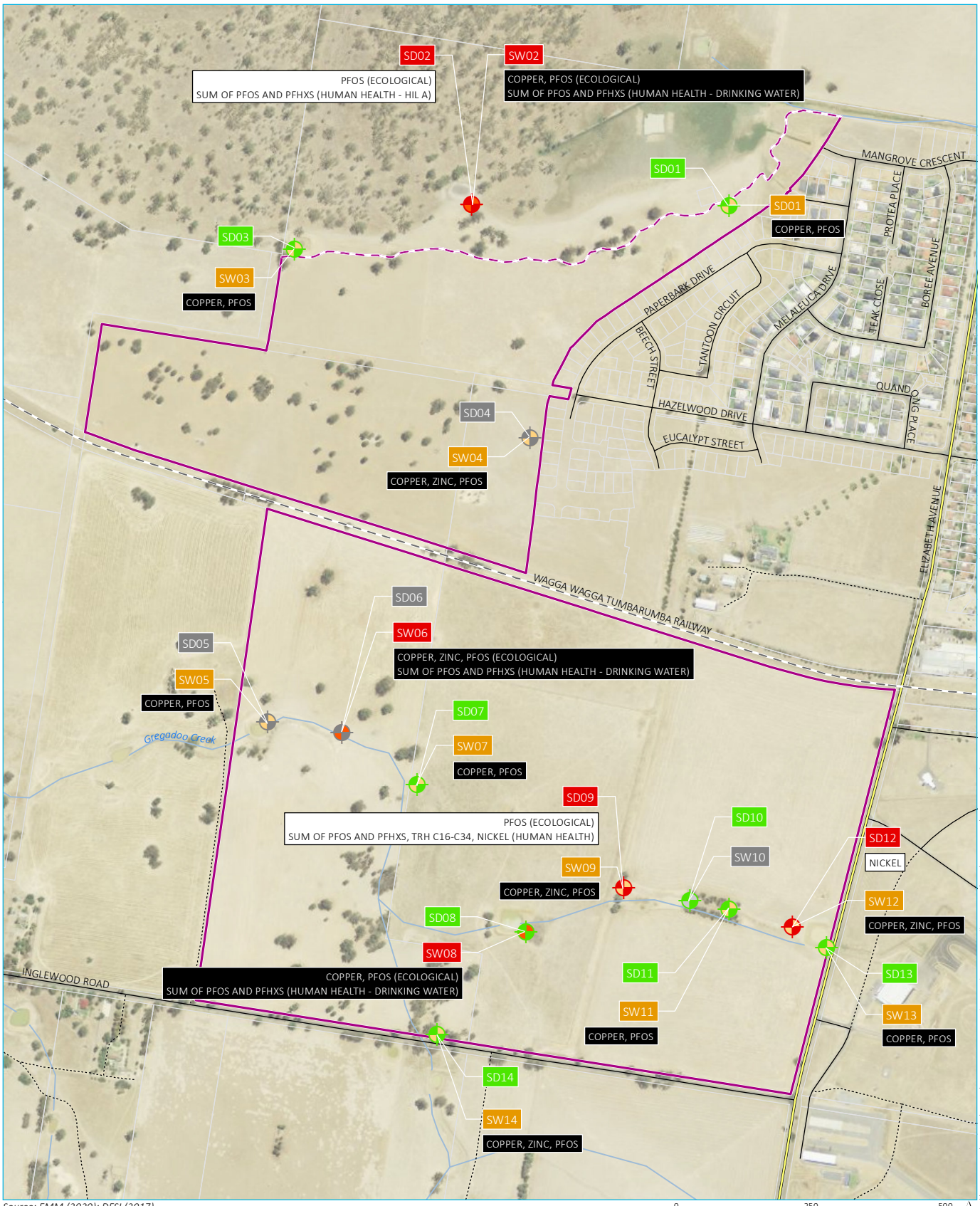
Exceedances of the adopted SAC at surface water locations are presented in Table 11.5 below.

Table 11.5 Summary of surface water SAC exceedances

Analyte	Adopted criteria	SAC (mg/L)	Location	Concentration (mg/L)
Copper (filtered)	ANZG (2018) Freshwater 95% toxicant DGVs	0.0014	SW01-SW09 and SW11-SW14	Ranging from 0.002 (SW04 and SW12) to 0.012 (SW07)
Zinc (Filtered)	ANZG (2018) Freshwater 95% toxicant DGVs	0.008	SW04, SW06, SW09, SW12 and SW14	0.010–0.234
PFOS	PFAS NEMP 2020 Freshwater 99%	0.00000023	SW01-SW09 and SW11-SW14	0.000004–0.00103*
Sum of PFHxS and PFOS	PFAS NEMP 2020 Table 1 Drinking Water	0.07	SW02, SW06 and SW08	0.08–1.27

* the LOR for PFOS of 0.000002 mg/L is greater than the SAC for freshwater protection of 99% of species. As noted in the PFAS NEMP, some agencies adopt a 'detect' threshold rather than a quantified measurement due to the low level.

Surface water results are shown on Figure 11.3.



Source: EMM (2020); DFSI (2017)

0 250 500 m

GDA 1994 MGA Zone 55

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KEY

- Project site
- 1 in 100 year flood line (approximate site boundary)
- Rail line
- Major road
- Minor road
- Vehicular track
- Watercourse/drainage line
- Cadastral boundary

Sediment sample results

- Below SAC
- Above ecological SAC
- Above human health SAC
- Not sampled
- XXX Contaminants above SAC

Surface water sample results

- Above ecological SAC
- Above human health SAC
- Not sampled
- XXX Contaminants above SAC

Surface water and sediment results

Brunslea Park Forest Hill
Detailed site investigation
Figure 10.3

EMM
creating opportunities

11.2.4 Sediment

A total of 14 primary sediment samples were submitted for laboratory analysis for CoPC associated with the identified source of potential contamination. The laboratory analytical results are presented in Appendix L and laboratory certificates of analysis are included in Appendix K.

Exceedances of the adopted SAC in sediment samples are presented in Table 11.6 below.

Table 11.6 Summary of sediment criteria exceedances

Analyte	Adopted criteria	SAC (mg/kg)	Location	Concentration (mg/kg)
Sum of PFHxS and PFOS	PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)	0.01	SD02, SD09	0.0213–0.0446
PFOS	PFAS NEMP Ecological Guidelines values – indirect exposure	0.01	SD02, SD09	0.0207–0.0432
TRH C_{16}-C_{34}	NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil	1300	SD09	2340
Nickel	ANZG Sediment DGVs	21	SD12	25

Sediment results are shown above on Figure 11.3.

12 Quality assurance and quality control

Data quality assurance and quality control (QA/QC) procedures were adopted to provide a consistent approach in the evaluation of DQIs. The process focused on assessing the useability of data in terms of accuracy and reliability in forming conclusions on the environment being investigated. The approach was based on guidance from the following sources:

- Australian Standard AS4482.1 - Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds (2005);
- the ASC NEPM; and
- United States Environmental Protection Agency (USEPA) – Guidance on Systematic Planning Using the Data Quality Objectives Process EPA QA/G-4 (2006).

12.1 Quality assurance and quality control

Data QA/QC procedures were adopted by EMM to provide a consistent approach to evaluation of whether the data quality objectives of the project have been achieved. The process focused on assessment of the useability of the data in forming conclusions on the condition of the elements of the environment being investigated. Acceptable limits on decision errors must be applied based on the DQIs of precision, accuracy, representativeness, comparability and completeness (PARCC).

An evaluation was made as to the likelihood of a decision error being made based on the results of a QA/QC assessment and the closeness of the data to assessment criteria. A decision on the acceptance of the analytical data was made on the basis of the DQI in the context of the PARCC parameters as follows.

- Precision: A quantitative measure of the variability (or reproducibility) of data.
- Accuracy: A quantitative measure of the closeness of reported data to the “true” value.
- Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on-site.
- Completeness: A measure of the amount of useable data from a data collection activity.
- Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

12.1.1 QA/QC methodology

The DQIs listed below in Table 12.1 are based upon data validation guidance provided in ASC NEPM (2013). The process involves the checking of analytical procedure compliance and an assessment of the accuracy and precision of analytical data from a range of quality control measurements, generated from both the field sampling and analytical programs.

12.2 Data quality indicators

The DQIs for the monitoring program have been established to set acceptance limits on field and laboratory data collected as part of this investigation. For both field and laboratory procedures, acceptance limits are set at different levels for different projects and by the laboratories. Non-compliances with acceptance limits are to be documented and discussed in the report. The DQIs are presented in Table 12.1 below.

Table 12.1 Data quality indicators

DQI	Field	Laboratory	Acceptability Limits
Completeness	All critical locations sampled All samples collected SOPs appropriate and complied with Experienced sampler Documentation correct	All critical samples analysed and for all COPC Appropriate methods implemented Appropriate laboratory limits of reporting (LORs) Sample documentation complete Sample holding times complied with.	As per SAQP[10] < nominated SAC As per SAQP[9]
Comparability	Sample SOPs used on each occasion Experienced sampler Climatic conditions Same types of samples collected	Same analytical methods used (including clean-up) Sample laboratory LORs (justify/quantify if different) Same laboratories (NATA accredited) Consistent reported units of measurement	As per SAQP[9] < nominated criteria
Representativeness	Appropriate media sampled	All critical samples analysed and for all COPC as required for the Project objectives.	Appropriate samples analysed
Precision	SOPs appropriate and complied with Collection of blind and split duplicate samples	Analysis of: Blind duplicate samples (1 in 20 samples) Split duplicate samples (1 in 20 samples) Laboratory duplicate sample.	Concentration x LOR — RPD (%) < 10 — 81% 10 - 30 — 50% 30 < — 30%
Accuracy	SOPs appropriate and complied with Collection of rinsate blanks	Analysis of: Field/trip blanks (1/day) Method blanks Matrix spikes Surrogate spikes Laboratory control samples Laboratory prepared spikes.	 Non-detect for CoPC Non-detect for CoPC 70−130% 70−130% 70−130% 70−130%

[10] (EMM) Sampling Analysis and Quality Plan June 2020

12.2.1 QA/QC conclusions

Based on EMM's review, it is considered that an acceptable degree of QA/QC information has been collected and reported in accordance with the laboratories internal standard operating procedures. Despite the minor variations/outliers summarised in Appendix C, the laboratory data are considered to provide an acceptable level of confidence in the precision, accuracy, representativeness, comparability and completeness of the analytical results.

13 Site characterisation

13.1 Field conditions

- During the DSI, no indicators of contamination were identified in soil, groundwater, sediment or surface water (odours, staining, anthropogenic inclusions, etc), other than the presence of an area of rubbish in the southern central portion of the Site.
- Fill materials were not encountered in the soil bores and/or groundwater monitoring wells.
- Local geology was consistent with the previous Defence investigations in the surrounding areas, comprising a surficial layer of silty clay, underlain by clay dominated soils with lenses of sand and gravel (Cowra Formation) merging into sand and gravel dominated soils with clay bands (Lachlan Formation). The distinct boundary between the two units was observed during the drilling programme.
- Groundwater was encountered in the Cowra Formation between approximately 9 m bgl and 15 m bgl. Although two wells were installed in the deeper water bearing units in the Lachlan Formation, SWLs recorded during gauging of the wells were also approximately 15 m bgl and similar groundwater parameters were recorded in the clustered wells (MW02A/MW02B and MW03A/MW03B). This indicates that there is connectivity between the shallow and deep groundwater in the north-western portion of the Site.
- A definitive groundwater flow direction could not be determined from the results of the DSI, however, the groundwater gradient appeared to slope to the west, which is consistent with previous investigations in the surrounding area.

13.2 PFAS results

13.2.1 Soils

Low concentrations of PFOS and PFHxS were reported in soil samples from eight of the 24 soil sampling locations, predominantly collected at the surface (0.05–0.1 m bgl), with the exception of MW06, where the sample was collected at 0.5 m bgl. Where deeper samples were analysed from these locations, PFAS concentrations were less than the laboratory LOR. The concentrations of PFAS in soils were an order of magnitude less than the SAC for residential land use (including ecological guideline values).

The source of PFAS detected in soil samples was not clear, however, it is not considered to be associated with groundwater migration or widespread contamination in soil based on the shallow depth and sporadic nature of the detections. Surface water flow or irrigation using contaminated water may have resulted in transport of contaminants. It is also possible that cross contamination from contact with PFAS containing items (waterproof clothing, permanent marker pens, plastic wrapping, etc) may have occurred. However, as EMM's field processes are designed to minimise this type of cross contamination (using pencil for note taking, etc) and detections were not reported in all samples, it is consider unlikely that cross-contamination would be the source.

Based on the concentrations detected, PFAS in soil is not considered to present an unacceptable risk to residential land use at the Site.

13.2.2 Sediments

In sediments, PFOS was reported in eight of the ten samples analysed, with PFHxS and PFDA also reported in one sample each. Concentrations of PFOS plus PFHxS were greater than the SAC for residential soil and indirect ecological exposure in two samples: SD02 collected from near the Gumly Gumly wetland (to the north of the 100 year flood line and outside of the Site); and SD09 from a drainage line in the south-eastern portion of the Site.

No PFAS were reported above the laboratory LOR in two additional sediment samples collected from the north-western edge of the Study Area, suggesting that PFAS contaminants are likely to be transported to the Gumly Gumly wetland via the stormwater drain at the northern boundary of the Site (which discharges into farm dams and ultimately the wetland) rather than surface water flows from other parts of the Site.

In the southern portion of the Site, detections of PFAS in sediment were generally an order of magnitude lower than the SAC along the ephemeral drainage line that flows from a dam at the eastern Site boundary to Gregadoo Creek, with the exception of SD09, which was collected from a suspected drainage line that was dry at the time of sampling.

It is noted that there are no sediment-specific guideline values for PFAS in either the AWQG or the PFAS NEMP. As a result, SAC for soil (residential land use and ecological guideline values) have been adopted as screening levels, which may be overly conservative based on the risk-based derivation of these values (consumption of soil, etc). Given the generally low concentrations of PFAS detected in sediments within the Site (within the exception of one sample), it is considered that sediment contamination is unlikely to present an unacceptable risk to future residential use at the Site. The southern portion of the Site including Gregadoo Creek is within the Defence PMAP Surface Water management zone and therefore, ongoing management to address potential ecological impacts is expected to be managed by Defence.

13.2.3 Surface water

The highest concentration of PFAS in surface water was reported in sample SW02, which was located to the north of the 100-year flood line and outside of the Site. This result has not been considered further in this DSI.

No samples reported PFAS concentrations greater than the SAC for recreational water use. Two samples reported concentrations of PFOS plus PFHxS greater than the SAC for drinking water in the southern portion of the Site, however this exposure pathway is not considered to be complete under a residential land use scenario (ie consumption of surface water is unlikely given residential developments will be connected to town water supply).

Concentrations of PFOS in all surface water samples were greater than the ecological guideline values for the protection of 99% of species in a high conservation value system. This assessment criterion is conservatively recommended due to potential bioaccumulation of PFAS. These results are not unexpected given the primary pathway for PFAS migration was identified to be surface water flow. Given the detections of PFAS in sediments and surface soils, surface water flow may be acting as a transport mechanism for contaminants across the Site.

The PFAS concentrations reported are not considered to present an unacceptable risk to future users of the Site under a residential land use, as human health assessment criteria were not exceeded. Additionally, the concentration of PFAS reported in surface water are not considered to adversely impact environmental values of the receiving water (such as Gumly Gumly wetland, Gregadoo Creek and Marshalls Creek), as these environments are already under management through the Defence PMAP. The mass of contaminant transport is also expected to be larger in the stormwater channel to the north of the Site, rather than ephemeral streams that traverse the Site, based on the findings of the Defence DSI and the higher concentrations reported in sampling location SD/SW02 to the north of the Site boundary.

13.2.4 Groundwater

PFAS was not reported at concentrations greater than the SAC for the protection of human health in any samples analysed. Low concentrations of some PFAS were reported above the laboratory LOR in two samples from the shallow aquifer, closest to the surface water drain at the northern boundary of the Site. These results may suggest that there is hydraulic connectivity between surface water and shallow groundwater in this area, as indicated by the Defence DSI and subsequent investigations.

As the potentially complete exposure pathway to groundwater in the preliminary CSM was identified as abstraction of groundwater for use in irrigation, etc, the concentrations reported and the limited number of samples returning a positive detection of PFAS indicate that the likelihood of groundwater PFAS contamination presenting an unacceptable risk under a residential land use is low. Based on depth to groundwater (9 m bgl or more), the potential for direct contact during construction is considered negligible.

PFOS was reported in one groundwater sample at a concentration greater than the ecological guideline value for indirect exposure, however, it is noted that the ecological SAC is below the laboratory LOR for groundwater analysis. This result is not considered to affect the suitability of the Site for residential land use as the concentration reported does not present an unacceptable risk to human health. Groundwater is expected to discharge into the Gumly Gumly wetland or the Murrumbidgee River further to the north-west, which has been shown to be impacted by PFAS contamination from RAAF Base Wagga and is subject to ongoing monitoring and management under the Defence PMAP. Given the depth to groundwater at the Site (at least 9 m bgl), ecological exposure pathways within the Site itself are considered to be limited to groundwater ecosystems.

13.2.5 Summary

As shown in the preliminary CSM and previous investigations at the Site, the primary transport method for PFAS contamination in the vicinity of the Site is surface water flow from off-site (RAAF Base Wagga or other sources such as the former Forest Hill RFS). This is confirmed by the highest number and concentration of PFAS being reported in surface water samples collected and analysed during this DSI. It is noted that concentrations of PFAS in samples collected within the Site were generally low, and marginally exceeded the SAC for drinking water, which is a conservative value based on direct consumption of contaminated water and is considered to be an unlikely exposure scenario at the Site.

As a result, PFAS is not considered to present an unacceptable risk to human health within the Site in the context of future residential land use.

Concentrations of PFAS greater than the ecological SAC are not considered to present an unacceptable risk to future use of the Site for residential purposes, noting that the receiving environment (Gumly Gumly wetland) is already subject to management under the Defence PMAP. Limited ecological exposure is expected to occur under the proposed residential land use and ongoing management of the PFAS source and surface water pathways by Defence is likely to reduce concentrations of PFAS in surface water over time.

13.3 Conventional contaminants

Concentrations of heavy metals (primarily copper and zinc) were reported to be greater than the ecological SAC in several groundwater and surface water samples at the Site. These results are not inconsistent with the findings of the Defence DSI and are likely to be representative of background water quality in the area and are not considered to present an unacceptable risk to future Site users.

TRH (C_{16}–C_{34}) was reported in one sediment sample (SD09 in the southern portion of the Site) at a concentration greater than the ESL. This location was consistent with where elevated PFAS was reported in a sediment sample and may represent on-site migration of contaminants from the neighbouring RAAF base. Nickel was also reported above the DGV for sediment in one location (SD12, also in the southern portion of the Site) and in groundwater from one location (MW04 at the north-western Site boundary). Given their isolated nature, these results are not considered to affect the suitability of the Site for residential land use.

14 Conceptual site model

The preliminary CSM presented in Section 7 has been updated based on the findings of the DSI as summarised in Table 14.1 and shown on Figure 14.1.

Table 14.1 Revised CSM

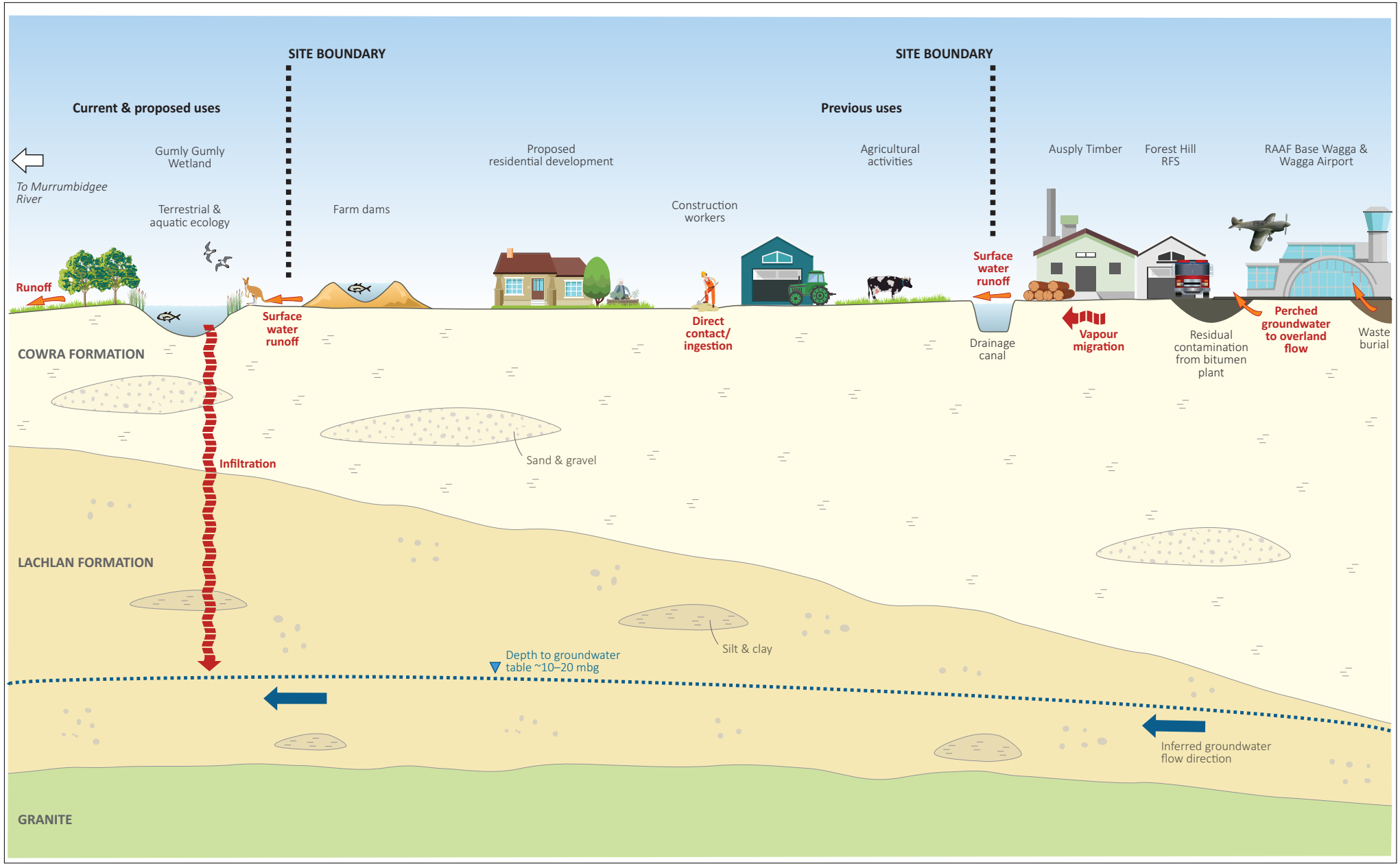
Source	Pathway(s)	Receptor(s)	SPR linkages complete, without mitigation/management measures?
Surface water farms dams, creeks and other surface water accumulations within the Study Area. Note: the Gumly Gumly wetlands and associated surface water drainage channels to the norther of the 100-year flood line have not been considered as these features are outside of the Site. Concentrations of CoPC were generally before the human health SAC, with the exception of two samples, where concentrations were reported above the drinking water guidelines for PFAS.	Direct contact with or ingestion of impacted surface water, soil and sediment.	• Site users, including construction workers.	Yes.
		• Future residents.	Unlikely, based on limited extent of contamination and limited exposure via ingestion.
		• Terrestrial ecology.	Yes, in surface water drainage lines. However, it is noted that surface water (which is the likely source and transport mechanism for contaminated sediment) is subject to ongoing management under the Defence PMAP and over time contaminant loads are likely to reduce. The mass of contamination migrating via surface water is also likely to be higher in the stormwater channel to the north of the Site compared to the ephemeral streams that traverse the Site.
	Ingestion of homegrown produce where impacted water is used for irrigation.	• Future residents.	Unlikely, based on limited extent of contamination and indirect exposure pathway (ie not direct consumption of contaminated water).
	Infiltration to regional aquifer.	• On-site and down gradient users of regional groundwater.	Unlikely, based on Site geology. Infiltration to the regional aquifer appears be limited to the wetlands area, beyond the north-western Site boundary.
	Uptake or ingestion of contaminated surface water.	• Terrestrial ecology. • Aquatic ecology.	Yes, concentrations of PFAS were greater than the SAC for ecological exposure in surface water samples.

Table 14.1 Revised CSM

Source	Pathway(s)	Receptor(s)	SPR linkages complete, without mitigation/management measures?
	Surface water flow overland and via Marshalls Creek.	• Downgradient users of surface water. • Aquatic ecology. • Terrestrial ecology.	Yes, however, it is noted that surface water is subject to ongoing management under the Defence PMAP and over time contaminant loads are likely to reduce. The mass of contamination migrating via surface water is also likely to be higher in the stormwater channel to the north of the Site compared to the ephemeral streams that traverse the Site.
Regional groundwater, known to be hydraulically connected to surface water in the north-west portion of the Site. No concentrations of CoPC were reported to be greater than the adopted SAC for human health.	Direct contact with impacted groundwater.	• Site users, including construction workers.	No, based on depth to groundwater (9 m bgl or more) and no CoPC reported to be greater than the SAC.
		• Future residents.	No, based on depth to groundwater (9 m bgl or more) and no CoPC reported to be greater than the SAC.
	Ingestion of abstracted groundwater.	• Future residents.	No, no CoPC reported at concentrations greater than he SAC within the Study Area.
		• Down-gradient users.	Unlikely, Defence PMAP groundwater management Zone in place in areas down-gradient of the Site.
	Uptake or ingestion of contaminated water.	• Terrestrial ecology.	Unlikely, based on depth to groundwater.
		• Aquatic ecology.	Yes.
Impacted soil or sediment No CoPC were reported at concentrations above the SAC for human health, with the exception of PFAS in one sediment sample.	Direct contact or ingestion.	• Site users, including construction workers.	Potential, based on low concentrations of PFAS reported in surface soil and sediment, due to limited extent of contamination.
		• Future residents.	Unlikely, due to limited extent of contamination and proposed development works.
	Ingestion of homegrown produce grown in impacted soil.	• Future residents.	Unlikely, based on limited extent of contamination.
	Inhalation of volatile contaminants.	• Site users, including construction workers.	No, no volatile CoPC reported.
		• Future residents.	No, no volatile CoPC reported.

Table 14.1 Revised CSM

Source	Pathway(s)	Receptor(s)	SPR linkages complete, without mitigation/management measures?
	Runoff of soil or sediment during periods of high water flow.	• Down gradient residents.	Unlikely, due to limited extent of contamination and known contamination in receiving environments.
		• Terrestrial ecology.	Potential.
		• Aquatic ecology.	Potential.



Revised Conceptual Site Model

Ashfield Wakehurst Development Pty Ltd c/: Yarraman Developments Pty Ltd
Detailed Site Investigation, Brunslea Park
Figure 14.1

EMM creating opportunities

15 Conclusions and recommendations

EMM was engaged to undertake a DSI to support a Planning Proposal for land near Forest Hill, to amend development standards (including land zoning) for residential land use, identified as part Lot 2 in DP 1262040, Lot 1 in DP 1220149, Lot 2 in DP 1077748 and Lot 1401 in DP 1262802 (the Site). This DSI was required to assess the presence of contamination that could affect the suitability of the Site for the proposed land use.

The Site is located approximately 1 km to the west of RAAF Base Wagga, where the former use of aqueous film forming foams (AFFF) has resulted in PFAS contamination. EMM undertook preliminary investigations, including a historical review and review of previous investigations undertaken by others at RAAF Base Wagga. The preliminary investigations indicated that activities at RAAF Base Wagga have resulted in PFAS impacts in the surrounding area, including soil, groundwater, sediment and surface water. Potentially complete exposure scenarios were identified at the Site between Site users, future residents, terrestrial and aquatic ecology and impacted surface water, sediments, and soils. Potential complete exposure scenarios between Site users, future residents and ecological communities and impacted groundwater were also identified in the north-western portion of the Site, where regional geology may allow connectivity between surface water and groundwater.

As a result, detailed investigations were required to assess potentially complete source-pathway-receptor exposure scenarios at the Site in the context of residential land use. This DSI comprised:

- soil sampling from 24 sampling locations, to approximately 3 m bgl;
- groundwater sampling from 6 locations, including 4 wells installed to target shallow groundwater in the upper Cowra Formation and 2 wells installed to target the deeper aquifer in the Lachlan Formation. These wells were installed at the north-western Site boundary to assess connectivity between surface water and groundwater, as indicated by the Defence DSI. Two groundwater monitoring wells installed at the eastern (up hydraulic gradient) boundary of the Site were dry at 15 m bgl, confirming limited migration of groundwater in the shallow geology;
- surface water sampling from 13 locations, including farm dams and surface water drainage lines throughout the Site; and
- sediment sampling from 14 locations, concurrent with the surface water sampling locations (with the exception of one location which was dry at the time of sampling).

The DSI did not identify contamination (PFAS or conventional contamination) in soil, sediment, groundwater and surface water at concentrations greater than the adopted SAC for human health, with the following exceptions:

- two samples of surface water with concentrations of PFOS + PFHxS greater than the SAC for drinking water. Consumption of surface water within the Site under a residential land use is considered an unlikely exposure pathway, as residences will be connected to a town water supply. Additionally, use of contaminated water for irrigation of home grown produce and subsequent consumption of that produce, is a potential indirect pathway for future residents, however the low concentrations and limited extent of contamination reported as well as the indirect nature of potential exposure is considered to make this an unlikely exposure scenario. Incidental ingestion may occur during development of the Site, with sensitive receptors identified as construction workers; and
- one sediment sample with a concentration of PFOS greater than the SAC for residential soil was reported within the Site. Given the limited extent of contamination it is considered that a compete exposure pathway with future residents is unlikely. Potential exposure during the construction phase is possible.

Concentrations greater than the ecological SAC were reported in sediment, surface water and groundwater as follows:

- PFOS was reported in one sediment sample (plus one sample to the north of the Site) at a concentration greater than the indirect ecological exposure guideline value for soil. This sample also reported a concentration of TRH greater than the ESL. Given the isolated nature of these results, no significant impact on the suitability of the Site for future residential land use is anticipated;

- PFOS was reported in one groundwater sample and all surface water samples at concentrations greater than the ecological assessment criteria. The ecological assessment criterion is noted to be very low (lower than the laboratory LOR for groundwater) so as to account for potential bioaccumulation. The source of surface water contamination (RAAF Base Wagga) is undergoing management and it is likely that contaminant load will reduce over time. Additionally, the receiving environments (such as Gumly Gumly wetland and Gregadoo Creek) are subject to ongoing management under the Defence PMAP. It is also expected that development of the Site will manage the migration of surface water across the Site, reducing opportunities for exposure (for example, using stormwater drains and removing farm dams). As a result, the exceedance of ecological criteria is not considered to affect the overall suitability of the Site for the proposed development; and

- potential terrestrial and aquatic ecological exposure pathways identified in the southern portion of the Site associated with the Gregadoo Creek catchment will require management if this area is retained at the Site as a riparian zone. This area falls within the Defence PMAP surface water management zone and will be subject to ongoing management measures to reduce contaminant load and mitigate exposure risks.

Based on the findings of this DSI, complete or potentially complete source-pathway-receptor linkages were identified for Site users including construction workers (direct contact with surface water and potentially with sediments), terrestrial ecology (surface water and sediments) and aquatic ecology (surface water and groundwater). It is considered that the Site can be made suitable for residential land use based on the following:

- As noted above, the Defence is actively managing PFAS contamination on the RAAF Base and in downgradient areas through the implementation of the PMAP. This includes groundwater and surface water management zones in areas surrounding the Site. Consequently, it is expected that the mass of contaminants migrating onto the Site in surface water will reduce over time, which would reduce impacts to surface water bodies, soil and sediment on the Site.

- Management of surface water is recommended during the construction phase to minimise direct contact between potentially impacted water and construction workers and reduce the migration of impacted sediment (either entrained in surface water flows or as a result of contaminants settling in bodies of standing water). Following construction, it is anticipated that surface water would be diverted into municipal stormwater drains or dedicated surface water drainage infrastructure, thereby minimising potential contact with future Site users and ecological receptors. If riparian zones are retained, further discussion may be required to understand the implementation of management measures under the Defence PMAP.

- While no contamination greater than the SAC was reported, it is recommended that the tip materials are removed from the Site and removal and/or validation of underlying soils is completed. The presence of tip materials is not in accordance with the aesthetic requirements of the ASC NEPM and the presence of localised contamination in the tip area cannot be precluded at this stage.

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Appendix A

Aerial photographs

Land Insight & Resources do no warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that this company shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

LIR-01006 Historical Aerial Photograph - 1966 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 1966

LAND INSIGHT & RESOURCES

MAP 1

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LIR-01006 Historical Aerial Photograph - 1971 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 1971

LAND INSIGHT & RESOURCES

MAP 2

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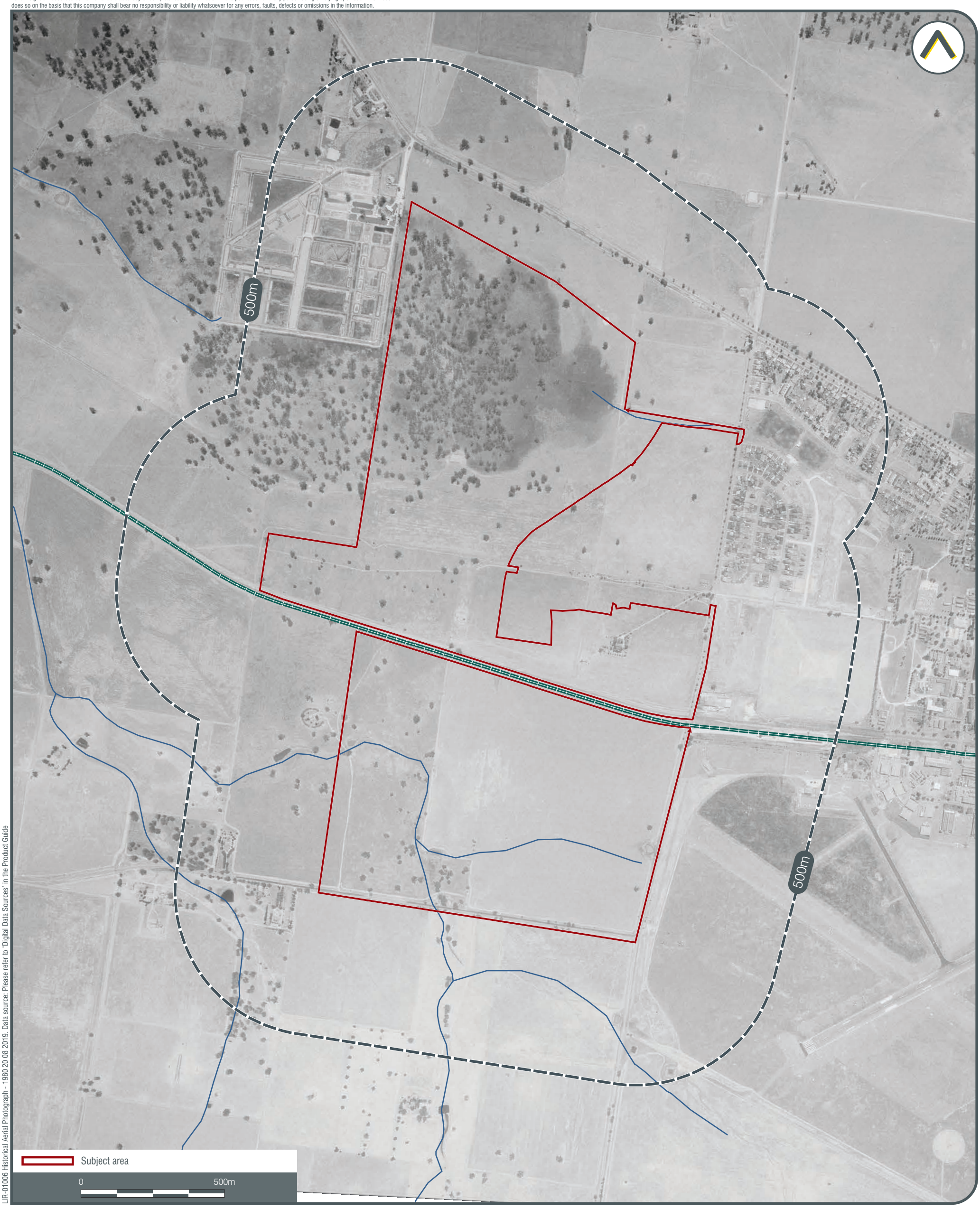

LIR-01006 Historical Aerial Photograph - 1980 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 1980

LAND INSIGHT & RESOURCES

MAP 3

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HISTORICAL AERIAL PHOTOGRAPH - 1998

LAND INSIGHT & RESOURCES

MAP 6

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LIR-01006 Historical Aerial Photograph - 2002 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 2002

LAND INSIGHT & RESOURCES

MAP 7

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LIR-01006 Historical Aerial Photograph - 2010 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 2010

LAND INSIGHT & RESOURCES

MAP 8

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LIR-01006 Historical Aerial Photograph - 2013 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 2013

LAND INSIGHT & RESOURCES

MAP 9

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LIR-01006 Historical Aerial Photograph - 2016 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 2016

LAND INSIGHT & RESOURCES

MAP 10

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LIR-01006 Historical Aerial Photograph - 2019 20 08 2019. Data source: Please refer to 'Digital Data Sources' in the Product Guide

HISTORICAL AERIAL PHOTOGRAPH - 2019

LAND INSIGHT & RESOURCES

MAP 11

Appendix B

EPA fact sheet

RAAF Base Wagga: PFAS Investigations

Update for local residents

Key points

- The Department of Defence is investigating potential per- and poly-fluoroalkyl substances (PFAS) contamination stemming from the historical use of fire-fighting foams at RAAF Base Wagga.
- These investigations have included a Human Health and Ecological Risk Assessment (HHERA), which assesses the potential risks to human health and the environment
- Investigations have found PFAS in biota, soil, surface and groundwater both on and offsite.
- The Department of Defence is conducting further testing to determine whether there are any potential impacts for the local community.
- A small number of residents at surrounding properties have been supplied with tailored precautionary advice to reduce their exposure to PFAS. This advice does not apply to the wider Wagga community.

What are PFAS?

PFAS are a group of manufactured chemicals that include perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

Due to their fire retardant, waterproofing and stain resistant qualities, these chemicals were widely used in some types of fire-fighting foams and other industrial products worldwide. PFAS can also be found in low concentrations in many consumer products like food packaging, non-stick cookware, fabric, furniture and carpet stain protection applications, clothing and shampoo.

The most common and prevalent sources of PFAS in the environment is where fire-fighting foams were used for training purposes, particularly on Department of Defence bases and at fire-fighting training facilities.

PFAS are very stable chemicals that do not easily break down and can persist in the environment.

Products containing PFAS are being phased out around the world.

Are PFAS a health risk?

The Australian Government's PFAS Expert Health Panel, in its report to the Federal Minister for Health, noted there is no current evidence to suggest an increase in overall health risk related to PFAS exposure. However, the Expert Panel also said health effects cannot be ruled out at this time.

Because the risks are not fully known, the NSW Government takes a precautionary approach to limiting people's exposure to PFAS. This includes occasionally providing precautionary advice to help limit people's exposure to PFAS. The EPA is leading the PFAS Investigation Program to understand the prevalence of this emerging contaminant in NSW. This program will help NSW be better prepared to respond if any health and environmental impacts become known.

The Expert Panel's report and a factsheet providing more information on PFAS and human health is available at **www.health.gov.au/pfas.**

Why is testing being undertaken at RAAF Base Wagga?

The Department of Defence is conducting PFAS investigations at locations across Australia where there has been significant historical use of PFAS-containing fire-fighting foams. These investigations are looking at the extent of the impact of PFAS, and the potential risks to the community.

PFAS foams were used at RAAF Base Wagga in fire-fighting training and operations prior to the foams being phased out.

What is known so far?

Investigations have found PFAS in biota, soil, surface and groundwater both on and offsite.

The detection of PFAS is not unexpected given the past use of PFAS-containing fire-fighting foams at the site. PFAS has also been used in many

domestic and industrial products and background levels may be present from these other sources.

Do residents need to do anything?

Finding PFAS in the environment does not mean there is a human health risk. It is important to assess if there are exposure pathways through which people might ingest PFAS, such as drinking contaminated ground water or consuming food products watered with contaminated ground water.

A small number of residents at surrounding properties have been supplied with tailored precautionary advice to reduce their exposure to PFAS. This advice is specific to those properties and does not apply to the wider Wagga community.

Regardless of PFAS detections, NSW Health recommends that people do not use groundwater for drinking, cooking and personal hygiene (including cleaning teeth and bathing) without testing and appropriate treatment.

Can I still fish and eat what I catch from local waterways?

The NSW PFAS Taskforce has assessed the levels of PFAS found in fish from Marshalls Creek and the Murrumbidgee River and determined that no dietary advice is required at this time.

Regardless of PFAS detections, Food Standards Australia and New Zealand recommends that only 2-3 serves of seafood a week should be consumed from a variety of sources and species. This advice is designed to limit exposure to mercury in fish across Australia. By following this advice, you will also minimise your exposure to PFAS in fish caught and consumed from Marshalls Creek and the Murrumbidgee River.

What are the next steps?

The NSW Environment Protection Authority (EPA) has requested that the Department of Defence undertake additional work to develop a Groundwater Model. This will provide a better understanding of the migration and extent of the PFAS contamination. It is expected that this will be completed in conjunction with a PFAS Management Area Plan (PMAP). The PMAP will provide a framework for the management and remediation of PFAS contaminated areas.

What is the NSW Government's role?

Although the NSW Government does not regulate Department of Defence sites, they have agreed to conduct investigations in a manner consistent with the EPA's requirements.

The NSW Government is committed to working with the Department of Defence to ensure timely and robust investigations are undertaken.

This collaboration ensures an appropriate, scientific and risk-based approach to protect the environment and community.

Where can I find more information?

More information, including detailed investigation reports, can be found on the Department of Defence website at **http://www.defence.gov.au/environment/pfas/**

More information on the NSW Government's response to PFAS can be found at **www.epa.nsw.gov.au/pfas.**

If you have any questions or concerns, call the 24/7 NSW Environment Line on **131 555**

NSW EPA

Appendix C

Data validation

DATA QUALITY ASSURANCE AND QUALITY CONTROL REPORT

Project number:	J200300	**Matrix type:**	Soil, sediment, water
Client:	Wakefield Ashurst Developments Pty Ltd	**Samples analysed:**	See Appendix A for sample register
Site(s):	Brunslea Park	**Laboratory:**	ALS (primary) Envirolab (secondary)
Sampling Events:	Soil investigation – 9-13 June 2020 Groundwater sampling – 17 June 2020 Surface water and sediment sampling – 10-11 and 16-17 June 2020	**Lab reference:**	ALS: EM2010131, ES2020331, ES2020525, ES2021234 Envirolab: 21470, 244865, 244965, 245159
Validation by:	A Tennant	**Date:**	15/07/2020
Verification by:	D Condon	**Date:**	17/08/2020

Field QA/QC	
Sampling personnel	Soil sampling was conducted by A Tennant, D Condon, Y Cheong, L Lewis and S Dillon. Numac Drilling Services were engaged for the soil investigation
Sampling Methodology	See Appendix B for sampling methodology.
Chain of Custody (COC)	Chain of custody documents were completed by EMM (D Condon, A Tennant, L Lewis, Y Cheong).
Analysis Request	Laboratory analysis request and sample receipt notification reviewed and approved by EMM.
Field Blanks	No field blanks were analysed as part of this assessment.
Rinsate Blanks *(RIN_200610, RIN_200611, RIN_200613, RIN_200614, QC300_200615, QC301_200616)*	Six rinsate samples were submitted to the laboratory for analysis. Concentrations were not detected above the LOR for all analytes tested.
Trip Blanks *(TRIP BLANK_01, TRIP BLANK_02, TRIP BLANK_03, TRIP BLANK_04, TRIP BLANK_05, TRIP BLANK_06, TB01_200615, TB, 02_200616, TB03_200617)*	Three water trip blanks and six soil trip blanks were submitted to the laboratory for analysis. Concentrations were not detected above the LOR for all analytes tested.
Trip Spikes *(TRIP SPIKE_01, TRIP SPIKE_02, TRIP SPIKE_03, TRIP SPIKE_04, TRIP SPIKE_05, TRIP SPIKE_06, TS01_200615, TS03_200617)*	Two water trip spikes and six soil trip spikes were submitted to the laboratory for analysis. Concentrations were within the designated Acceptability Limits as per the guidelines adopted within the SAQP with the exception of the following: • TRIP SPIKE_01: Xylene (o) 29.63% spike recovery • TRIP SPIKE_02: Xylene (m & p) 24.87% spike recovery, Xylene Total 23.97% spike recovery, Xylene (o) 21.622% spike recovery • TRIP SPIKE_04: C6-C10 (F1 minus BTEX) 152% spike recovery
Intra-laboratory and interlaboratory duplicates *(QA01, QA02, QA03, QA04, QA05. QA06, QA07, QA08, QC100_200616, QC101_200616, QC103_200616, QC200_200617, QC201_200617, QC302_200617)*	Intra- and inter-laboratory field duplicate samples were collected at a frequency of one per eighteen primary soil samples, one per six primary groundwater samples, one per fourteen primary sediment samples, and one in thirteen primary surface water samples. Satisfying the adopted acceptability criteria of at least one per twenty primary samples (one of each).

DATA QUALITY ASSURANCE AND QUALITY CONTROL REPORT

Project number:	J200300	**Matrix type:**	Soil, sediment, water
Client:	Wakefield Ashurst Developments Pty Ltd	**Samples analysed:**	See Appendix A for sample register
Site(s):	Brunslea Park	**Laboratory:**	ALS (primary) Envirolab (secondary)
Sampling Events:	Soil investigation – 9-13 June 2020 Groundwater sampling – 17 June 2020 Surface water and sediment sampling – 10-11 and 16-17 June 2020	**Lab reference:**	ALS: EM2010131, ES2020331, ES2020525, ES2021234 Envirolab: 21470, 244865, 244965, 245159
Validation by:	A Tennant	**Date:**	15/07/2020
Verification by:	D Condon	**Date:**	17/08/2020

Handling and preservation	All samples were received at the laboratories in appropriate sample containers. Water samples were received preserved with attempt to chill at the laboratories (2.7°C, 5.2°C, 6.5°C, 7.1°C, 13.5°C, 7.9°C, 13.1°C, 12.8°C). It is noted that some batches of samples were not received chilled within the recommended temperature range (< 6°C). Attempt to chill was evident for all sample batches and the higher temperatures are not expected to have a material impact on the data integrity.
Laboratory QA/QC	
Tests requested/reported	Samples were analysed and reported as requested on the COC.
Holding time compliance	Samples were extracted and analysed within recommended holding times for all analytes.
Laboratory Accreditation	The laboratory analysis was conducted by ALS Environmental Pty Ltd in Sydney (primary lab) and Envirolab Services Pty Ltd in Sydney (secondary lab) and), both are National Association of Testing Authorities (NATA) accredited laboratories.
Frequency of laboratory QC	The laboratories reported ten outliers for frequency of quality control samples. There outliers are minimal in comparison to the dataset and are therefore not expected to have a material impact on the data quality.
Method Blank	Method blank concentrations were not detected above the LOR for all analytes
Laboratory duplicate RPDs	Laboratory duplicate (LD) Relative Percentage Differences (RPD) were within control limits with the exception of the following: • Chromium (SD13) – 28% (0 – 20% limit) As all other LD RPDs met control limits, this exception is not expected to have a material impact data integrity.
Laboratory control spike recovery	LCS recoveries were within control limits for all analytes with the exception of the following: • Iodomethane – 42% (47 – 125% limit) As all other LCS recoveries met control limits, this exception is not expected to have a material impact data integrity.
Matrix spike recovery	Matrix spike (MS) recoveries (where reported) were within control limits with the exception of the following: • Perfluorodecane sulfonic acid (PFDS) – 32% (59 – 134% limit) • 10:2 Fluorotelomer sulfonic acid (10:2 FTS) – 44.8% (50 – 130 % limit)

DATA QUALITY ASSURANCE AND QUALITY CONTROL REPORT

Project number:	J200300	**Matrix type:**	Soil, sediment, water
Client:	Wakefield Ashurst Developments Pty Ltd	**Samples analysed:**	See Appendix A for sample register
Site(s):	Brunslea Park	**Laboratory:**	ALS (primary) Envirolab (secondary)
Sampling Events:	Soil investigation – 9-13 June 2020 Groundwater sampling – 17 June 2020 Surface water and sediment sampling – 10-11 and 16-17 June 2020	**Lab reference:**	ALS: EM2010131, ES2020331, ES2020525, ES2021234 Envirolab: 21470, 244865, 244965, 245159
Validation by:	A Tennant	**Date:**	15/07/2020
Verification by:	D Condon	**Date:**	17/08/2020

	• Arsenic – 12.7% (82 – 118% limit) • Chromium – 78.2% (80 – 118% limit) • Nickel – 120% (80 – 118% limit) As other QA/QC met control limits, these exceptions are not expected to have a material impact on data integrity.
Surrogate spike recovery	Surrogate spike recoveries were within control limits for all analytes with the exception of the following: • 2.4-Dichlorophenyl Acetic Acid – 17.8% (45 – 139% limit) • 2.4-Dichlorophenyl Acetic Acid – 18.5% (45 – 139% limit) • 13C4-PFOS – 124% (60 – 120% limit) • 13C4-PFOS – 123% (60 – 120% limit) As all other surrogate spike recoveries met control limits, thed exceptions are not expected to have a material impact data integrity.
Data Validation	
Comparison of Field Observations and Laboratory Results	No anomalous results between field observations and analysis results were noted.
Data transcription	A random check of the laboratory results identified no anomalies between the electronic data, the laboratory reports, and tables generated by EMM.
Limits of Reporting (LOR)	LORs were sufficiently low to enable assessment against adopted guideline criteria.
Intra-laboratory duplicate RPDs	Intra-laboratory field duplicate RPDs were reported within control limits with the exception of the following: • Chromium (III+VI) – 75% (MW05_0.5/QA07) Inter-laboratory RPD exceedances are not expected to impact the overall data quality of the batch. The results are generally within the same order of magnitude. As a conservative measure, the highest results will be used for reporting purposes.

DATA QUALITY ASSURANCE AND QUALITY CONTROL REPORT

Project number:	J200300	**Matrix type:**	Soil, sediment, water
Client:	Wakefield Ashurst Developments Pty Ltd	**Samples analysed:**	See Appendix A for sample register
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Validation by:	A Tennant	**Date:**	15/07/2020
Verification by:	D Condon	**Date:**	17/08/2020

Inter-laboratory duplicate RPDs	Inter-laboratory field duplicate RPDs were reported within control limits with the exception of the following: • Perfluorooctanesulfonic acid (PFOS) – 70% (SD12/QC201) • Sum of PFAS – 70% (SD12/QC201) • Sum of PFHxS and PFOS – 70% (SD12/QC201) • C10-C40 (Sum of total) – 82% (BH15_0.1/QA06) • C10-C40 (Sum of total) – 162% (SD12/QC201) • C16-C34 – 95% (SD12/QC201) • Chromium (III+VI) – 93% (MW05_0.5/QA08) • Lead – 55% (SD12/QC201) • Nickel – 54% (MW05_0.5/QA08) Inter-laboratory RPD exceedances are likely due to the sample heterogeneity in soil and sediment samples and is not expected to impact the overall data quality of the batch. The results are generally within the same order of magnitude. As a conservative measure, the highest results will be used for reporting purposes.

Chromatograms

N/A

Comments

The assessment of field and laboratory QA/QC data indicated that the reported analytical results are representative of the conditions at the sample locations analysed and that the overall quality of the data produced is considered to be acceptably reliable for the purpose of this investigation. Despite the minor variations/outliers summarised above, the laboratory data are considered to provide and appropriate level of confidence in the accuracy, comparability, completeness and precision of the analytical results.

Appendix A

Samples analysed

Table A.1 Samples analysed

Sample type	Sample IDs
Borehole	BH01_0.1, BH01_0.5, BH01_1.0, BH01_2.0, BH01_2.7, BH02_0.1, BH02_0.5, BH02_1.0, BH02_2.0, BH02_2.8, BH03_0.1, BH03_0.5, BH03_1.0, BH03_2.0, BH03_2.8, BH04_0.1, BH04_0.5, BH04_1.0, BH04_2.0, BH04_2.8, BH05_0.1, BH05_0.5, BH05_1.0, BH05_2.0, BH05_2.7, BH06_0.1, BH06_0.5, BH06_1.0, BH06_2.0, BH06_2.6, BH07_0.1, BH07_0.5, BH07_2.0, BH08_0.1, BH08_0.5, BH08_1.0, BH09_0.1, BH09_0.5, BH09_2.0, BH10_0.1, BH10_0.5, BH10_1.0, BH10_2.8, BH11_0.1, BH11_0.5, BH11_2.0, BH12_0.1, BH12_0.5, BH12_1.0, BH12_2.0, BH12_2.9, BH13_0.1, BH13_0.5, BH13_1.5, BH14_0.1, BH14_0.5, BH14_1.0, BH14_2.9, BH15_0.1, BH15_0.5, BH15_1.0, BH15_2.8, BH16_0.1, BH16_0.5, BH16_1.0, BH16_2.0, BH17_0.1, BH17_0.5, BH17_2.0, BH18_0.1, BH18_0.5, BH18_2.0
Monitoring well (soil)	MW01_0.05, MW01_0.9, MW01_2.0, MW01_3.0, MW02A_0.05, MW02A_1.0, MW02A_13.9, MW02A_2.0, MW02A_3.0, MW02B_0.05, MW02B_1.0, MW02B_13.65, MW02B_2.0, MW02B_3.0, MW03A_0.1, MW03A_0.5, MW05_1.0, MW05_2.8, MW06_0.1, MW06_0.5, MW06_1.0, MW06_3.0, MW03A_1.0, MW03A_2.0, MW03A_2.7, MW03B_0.05, MW03B_1.0, MW03B_2.0, MW03B_3.0, MW04_0.1, MW04_0.5, MW04_1.0, MW04_2.0, MW05_0.1, MW05_0.5
Monitoring well (water)	MW01_200617, MW02A_200615, MW02B_200616, MW03A_200616, MW03B_200616, MW04_200616
Sediment	SD01, SD02, SD03, SD04_200616, SD05_200616, SD06_200616, SD07, SD08, SD09_200617, SD10_200617, SD11, SD12_200617, SD13, SD14_200616
Surface water	SW01, SW02, SW03, SW04_200616, SW05_200616, SW06_200616, SW07, SW08, SW09_200617, SW11, SW12_200617, SW13, SW14_200616
Surface soil	SS03_200617, SS04_200617, SS05_200617
Inter- and intra-laboratory	QA01, QA02, QA03, QA04, QA05. QA06, QA07, QA08, QC100_200616, QC101_200616, QC103_200616, QC200_200617, QC201_200617, QC302_200617
Rinsate	RIN_200610, RIN_200611, RIN_200613, RIN_200614, QC300_200615, QC301_200616
Trip blank	TRIP BLANK_01, TRIP BLANK_02, TRIP BLANK_03, TRIP BLANK_04, TRIP BLANK_05, TRIP BLANK_06, TB01_200615, TB02_200616, TB03_200617
Trip spike	TRIP SPIKE_01, TRIP SPIKE_02, TRIP SPIKE_03, TRIP SPIKE_04, TRIP SPIKE_05, TRIP SPIKE_06, TS01_200615, TS03_200617

Appendix B

Sampling methodology

Field sampling methods were undertaken in accordance with Standard Operating Procedures (SOPs) for each task within the monitoring program.

Guidance provided in the following documents was used to inform the sampling program:

- National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination) Measure, Schedule B2: Guideline on Site Characterisation (as amended in May 2013) (ASC NEPM, 2013).
- Standards Australia (AS4482.1-2005) Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds.
- Standards Australia (AS 4482.2 - 1999) Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances.

The field rationale and methodology is detailed below in Table B.1.

Table B.1 Fieldwork methodology

Activity	Description
Service clearance and utility avoidance	**9 June 2020**
Subcontractor	Wagga Directional Drilling
Scope	EMM undertook a Dial-Before-You-Dig (DBYD) search of the general areas proposed for intrusive investigations Each soil bore location was scanned by a qualified and Telstra-accredited service locating contractor to ensure the location is free of utilities and services that may be affected by the works.
Rationale	To ensure there is no impact with subservice services during the drilling activities
Methods	Wagga Directional Drilling undertook the scope using active and passive service location techniques
Soil investigation	**9 June 2020 – 13 June 2020**
Subcontractor	Numac Drilling
Scope	Soil bores were advanced at 24 locations across the Site (BH01 – BH18 and MW01, MW02A, MW03A and MW04 – MW06). Six (6) soil bore locations were subsequently advanced for the installation of shallow groundwater monitoring wells (see below). Soil samples were collected to a maximum depth of 3.0 m bgl.
Methods	Soil bores were progressed using direct push (Geoprobe) methods to maximum depth of 3.0 m bgl or until refusal. Soil samples were collected using push-tube sampling methods and decanted directly into laboratory supplied sample jars for transport to the nominated laboratories under chilled conditions. At the deep (MW02B and MW03B) groundwater well monitoring locations soil samples were collected using the sonic core method which is a comparable method to the push tube and prevents the need to change drilling apparatus. Samples were collected from the surface and at 0.5–1 m intervals until completion of the bore. Excess soil generated during the sampling events was collected in drums and stored at the Site for classification and re-use or off-site disposal.
Soil classification and logging	Lithological conditions were logged according to EMM's standard field protocols using the Unified Soil Classification System. Soil classification is based on field observations and only intended to provide a general indication of the soil characteristics encountered. Soil borehole logs are included in **Error! Reference source not found.**.

Table B.1 Fieldwork methodology

Activity	Description
VOC field measurements	During soil sampling, a calibrated photo-ionisation detector (PID) was used to collect volatile organic compound (VOC) field measurements. A sub-sample of soil was placed in a snap-lock bag which was sealed and left for a minimum of five minutes prior to measurements being taken. The PID measurements are detailed on the borehole logs within **Error! Reference source not found.**.
Groundwater well installation and development	**9 June 2020 – 13 June 2020**
Subcontractor	Numac Drilling
Scope	Groundwater well installation and development at 8 locations (6 x shallow and 2 x deep)
Methods	Six of the soil bores soil bore locations and two additional locations (8 total) were progressed using a mixture of solid stem auger, sonic and airlift methods until groundwater was encountered. 8 groundwater wells were installed and constructed using 50-mm diameter class PM18 PVC: • Shallow groundwater monitoring wells (MW01, MW02A, MW03A and MW04 – MW06) were advanced to between 10 m bgl and 17.3 m bgl, targeting shallow/perched groundwater in the Cowra Formation. Slotted screens were installed across the standing water level (SWL) or in potential water bearing horizons (i.e. sandy/gravelly lenses within clay geology). • Deeper groundwater monitoring wells (MW02B and MW03B) were advanced to 35.3 m bgl, with slotted screens installed to target deeper groundwater in the Lachlan Formation. The screens were installed in sand and gravel horizons encountered below the confining clay layers of the Cowra Formation. A minimum 3 m length of slotted screen was installed in each well. The borehole annulus was filled with a gravel pack to 0.5 m above the slotted screen followed by a 1.0 m bentonite pack. The remaining borehole annulus was filled with grout and capped with a monument stickup. Groundwater well borelogs and well construction diagrams are included in **Error! Reference source not found.** and **Error! Reference source not found.**, respectively. Each GMW installed was developed using air lift methods and completed by the drillers under supervision of EMM to ensure representative samples were obtained during the Groundwater Monitoring Event (GME. Purged waters was collected in drums and stored at the Site for classification and re-use or off-site disposal. Groundwater development forms are included in **Error! Reference source not found.**.
Soil classification and logging	As detailed above for soil. Groundwater well logs are included within **Error! Reference source not found.**.
VOC field measurements	As detailed above for soil. The PID measurements are detailed on the groundwater well logs within **Error! Reference source not found.**.
Water quality measurements	Water quality measurements were recorded during well development. Temperature, pH, redox potential (ORP), electrical conductivity (EC) and dissolved oxygen (DO) field parameters were recorded using a calibrated water quality meter. Water quality parameters are included in the groundwater development forms within **Error! Reference source not found.**.

Groundwater level measurement	**15 June 2020**
Scope	Measurement of standing water levels (SWLs) in all groundwater wells
Methods	The monitoring was conducted using an electronic interface probe and were taken in as close succession as possible between wells. The time of measurement at each bore was recorded and all measurements were taken from the top of the inner uPVC casing, at the same point (a notch, or black mark was placed into the edge of the casing to assure consistency in measurement). The groundwater gauging records are included in **Error! Reference source not found.**.

Table B.1 Fieldwork methodology

Activity	Description
Groundwater Monitoring	**17 June 2020**
Scope	Groundwater sampling of six newly installed wells; MW05 and MW06 were dry and could not be sampled.
Methods	Six groundwater wells were sampled using low flow micro-purge and peri-pump methods. Each well was purged using a QED sample pro pump system or peri-pump to minimise drawdown. Standing water levels (SWLs) were monitored using an electronic water level meter during the purging process to ensure drawdown was minimised. Wells were sampled using dedicated Teflon free HDPE to ensure accurate analysis for Per- and polyfluoroalkyl substances (PFAS). Additionally, items that were not be handled before sample collection or come in contact with the monitoring well or sample containers include aluminium foil, self-sticking notes (post it notes), waterproof paper or labels, Decon90 or detergent and reusable chemical or gel ice packs. The following sampling method was followed as it is applicable for both inorganic and organic analytes: • groundwater samples were collected directly from the discharge line while the pump is operating, if the pumping rate is reduced to less than 1 litre per minute; and • samples were placed into appropriate containers provided by the laboratory. Samples were obtained immediately upon purging the bores or upon recovery of a sufficient sampling volume for low yielding bores. All samples were placed in an insulated rigid container with ice bricks and transported to the analysing laboratory under chain of custody protocol. Crushed ice was wrapped in thick plastic bags and melted ice was emptied regularly to prevent ingress into the samples. Purged waters were collected in drums and stored at the Site for classification and re-use or off-site disposal. Groundwater sampling forms are included within **Error! Reference source not found.**.
Water quality measurements	Water quality measurements were recorded during the purging of each well. Temperature, pH, ORP, EC and DO parameters were recorded using a calibrated water quality meter until stable. Water quality parameters are included in the groundwater sampling forms within **Error! Reference source not found.**.
Surface water and sediment sampling	**10 – 11 and 16 – 17 June 2020**
Scope	Sampling of 14 co-located surface water and sediment locations. At SW/SD10 only a sediment sample was able to be taken as no surface water was present.
Methods	Sediment samples were collected manually using a trowel and by hand (using fresh nitrile gloves for each sample). Surface water samples were collected manually by hand or an extendable grab-sampling pole directly into the sample bottle. Sampling forms are included within **Error! Reference source not found.**.
Soil classification and logging	As per detailed above for soil.
VOC field measurements	As detailed above for soil investigation taken only at SW/SD04, SW/SD05, SW/SD06, SW/SD09, SD10 and SW/SD12. The PID measurements are detailed on the sampling sheets within Appendix J.
Quality assurance / quality control	**All sampling events**
Sample handling and preservation	Samples were collected immediately and placed into laboratory-supplied jars and stored in an esky with ice prior to and during transit to the laboratory. Samples were transported to the laboratory with accompanying chain of custody (COC) documentation and laboratory provided security seals. Details of the sample transportation and handling can be found on the COC and laboratory documentation provided within **Error! Reference source not found.**.
Prevention of cross contamination	Procedures employed to prevent cross contamination included: • The trowel, water quality meter and pump equipment were decontaminated between each location as follows: – wipe the equipment (the length that comes into contact with the media) using disposable alcohol wipes. Dispose of the alcohol wipes into a contaminated waste bag;

Table B.1 Fieldwork methodology

Activity	Description
	– empty pump bladder and leftover groundwater in wastewater container using a funnel; – wash the equipment using a scrubbing brush in a bucket with a solution of potable water and detergent (phosphate free and suitable for PFAS sampling, eg Liquinox); – rinse the equipment with potable water in another bucket; – final rinse of all apparatus using deionised water in a spray bottle/bucket or directly from the deionized water container; and – the wash solution needs to be renewed when the decontamination process becomes ineffective, eg product on the probe after rinsing or sheen in the wash solution buckets • Disposable gloves were replaced between each soil sample collected.

B.1 Sediment and surface water

Sediment sampling were conducted in accessible drainage lines and standing water bodies and, where water is present, a co-located surface water sample was collected.

Sediment samples in shallow submerged (no greater than 300mm) locations were manually collected using a trowel. For sediment samples in dry stream beds or drainage lines, a small stainless steel shovel or stainless steel trowel was used.

Where water is present, water samples were collected from shallow (no greater than 300mm) locations either manually (by entry) or by use of an extendable grab-sampling pole.

Samples were placed into laboratory supplied containers and stored in chilled eskies and transported to the receiving laboratories under chain-of-custody (CoC) controls.

B.2 Soil

Soil boring will be undertaken by a licensed driller (NUMAC) under the direction of an experienced EMM environmental scientist who will log bore recovery and make periodic observations and field screen soils for the presence of VOCs. Soil samples will be collected using push tube sampling methods using a Geoprobe drilling rig.

Subsurface conditions will be logged in general accordance with the United Soil Classification System (USCS), and will include any observations of potential contamination, such as staining or odours. Each sample will also be screened in the field using a photo-ionisation detector (PID) to detected volatile organic compounds (VOC).

Soil samples will be collected using push-tube sampling methods and decanted directly into laboratory supplied sample jars for transport to the nominated laboratories under chilled conditions. Samples will be collected from the surface and at 0.5–1 m intervals until completion of the bore (or to approximately 3 m bgl at the groundwater monitoring well locations). Excess soil generated during the sampling events will be collected in drums and stored at the Site for classification and re-use or off-site disposal.

EMM acknowledges that the number of sampling locations would not comply with the minimum number of sampling locations recommended in NSW EPA (1995), if the Site were to be divided into smaller (up to 5 ha) areas for investigation. However, the proposed investigation is designed to provide general coverage of the Site in consideration of the identified sources of potential contamination (ie relatively consistent CoPC, diffuse contamination sources and pathways primarily associated with surface water migration), and are considered appropriate to meet the project objective of supporting a rezoning application for residential land use. More targeted investigations may be required in some areas of the Site to support individual development applications.

B.3 Groundwater

Wells were sampled using dedicated Teflon free HDPE to ensure accurate analysis for Per- and polyfluoroalkyl substances (PFAS). Additionally, items that should not be handled before sample collection or come in contact with the monitoring well or sample containers include aluminium foil, self-sticking notes (post it notes), waterproof paper or labels, Decon90 or detergent and reusable chemical or gel ice packs.

The following sampling method was followed as it is applicable for both inorganic and organic analytes:

- groundwater samples were collected directly from the discharge line while the pump is operating, if the pumping rate is reduced to less than 1 litre per minute; and
- samples were placed into appropriate containers provided by the laboratory.

Samples were obtained immediately upon purging the bores or upon recovery of a sufficient sampling volume for low yielding bores. All samples were placed in an insulated rigid container with ice bricks and transported to the analysing laboratory under chain of custody protocol. Crushed ice was wrapped in thick plastic bags and melted ice was emptied regularly to prevent ingress into the samples.

B.4 Laboratory analysis

All samples were transferred to National Association of Testing Authorities (NATA) laboratories under chain of custody conditions. Select samples for quality assurance purposes were taken to a secondary laboratory. Nominated laboratories for this DSI are:

- Australian Laboratory Services (ALS) – primary laboratory; and
- Envirolab Services (Melbourne) – secondary laboratory.

For groundwater, surface water and sediment, only one sample was collected at each location, therefore every primary sample was analysed. For soil, two samples were selected for analysis from each location based on location, rationale for collection and field observations (such as indicators of contamination).

Based on previous investigations in the area and the findings of the PSI, the analytical suite shown in Table B.2 was used for this DSI.

Table B.2 Analytical suite and number of samples

CoPC	Groundwater	Surface water	Sediment	Soil
PFAS	6 primary samples	13 primary samples	10 primary samples	30 primary samples
Total Recoverable Hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN)	6 primary samples	13 primary samples	14 primary samples	47 primary samples
Polycyclic Aromatic Hydrocarbons (PAHs)	4 primary samples	13 primary samples	14 primary samples	47 primary samples
Organochlorine/ organophosphate pesticides (OCP/OPP)	4 primary samples	13 primary samples	14 primary samples	46 primary samples
Phenoxyacid herbicides	4 primary samples	6 primary samples	7 primary samples	12 primary samples
Heavy metals	6 primary samples	13 primary samples	14 primary samples	47 primary samples
Polychlorinated biphenyls (PCBs)	2 primary samples	4 primary samples	4 primary samples	12 primary samples
Chlorinated hydrocarbons (VCH)	2 primary samples	4 primary samples	4 primary samples	12 primary samples
Asbestos	N/A	N/A	2 primary samples	10 primary samples

B.5 Decontamination

The equipment (low flow pump/interface probe/sediment trowel) WAS decontaminated prior to use and between sampling each surface sample location by adopting the following procedures:

- wipe the equipment (the length that comes into contact with the media) using disposable alcohol wipes. Dispose of the alcohol wipes into a contaminated waste bag;
- empty pump bladder and leftover groundwater in wastewater container using a funnel;
- wash the equipment using a scrubbing brush in a bucket with a solution of potable water and detergent (phosphate free and suitable for PFAS sampling, eg Liquinox);
- rinse the equipment with potable water in another bucket;
- final rinse of all apparatus using deionised water in a spray bottle/bucket or directly from the deionized water container; and
- the wash solution needs to be renewed when the decontamination process becomes ineffective, eg product on the probe after rinsing or sheen in the wash solution buckets.

Appendix D

Soil borelogs

SOIL BORE LOG BH01

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.7 mbgl	**COORD SYS** E541012, N6110284
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, soft light brown orange silt with clay fines. No odour/staining/ACM. Rootlets and organics observed	Soft	Dry	0.0	BH01_0.1		
0.2								
0.4		Silty CLAY: Low plasticity, orange coloured clay. Some silt still observed. No odour/staining/ACM.	Very hard	Dry	0.0	BH01_0.5		
0.6								
0.8								
1					0.0	BH01_1.0 QA01 QA02		
		Red mottle clay, very hard, dry and crmbles	Loose, friable	Dry				
1.2								
1.4								
1.6		Colour change to light brown clay. Silts still throughout.	Loose	Dry				
1.8								
2					0.0	BH01_2.0		
2.2								
2.4								
2.6					0.0	BH01_2.7		
2.8		Termination Depth at: 2.7 mbgl. Refusal.						

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SOIL BORE LOG BH02

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E540688, N6110186
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, soft light brown silts mixed with low plasticity clay. No odour/staining/ACM. Rootlets observed.	Soft	Dry	0.6	BH02_0.1		
0.2								
0.4		Silty CLAY: Low plasticity, light brown coloured clay. Very crumbly. Some red and orangle mottle throughout. No odour/staining/ACM.	Loose	Dry	0.3	BH02_0.5		
0.6								
0.8								
1					0.5	BH02_1.0		
1.2								
1.4								
1.6		Lighter grey/white colour	Very loose					
1.8								
2		Dark black motle, not odourous. Possible organic mottle.			0.5	BH02_2.0		
2.2								
2.4								
2.6		Light brown colour, otherwise as above						
2.8					0.4	BH02_2.8		
		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH03

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E540434, N6110071
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, soft light brown silts. Lots of rootlets and organic matter. Low plasticity clay. No odour/staining/ACM.	Soft	Dry	0.5	BH03_0.1		
0.2								
		Silty CLAY: Low plasticity, brown coloured clay. Rootlets, mixed with fine silt. No odour/staining/ACM.	Loose	Dry				
0.4					0.4	BH03_0.5		
0.6								
0.8			Crumble					
1					0.5	BH03_1.0		
1.2								
1.4								
1.6								
1.8								
2		Some grey/white coloured mottle			0.4	BH03_2.0		
2.2								
2.4								
2.6								
2.8					0.2	BH03_2.8		
		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH04

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E540045, N6110157
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, light brown silt with low plasticity clay. No odour/staining/ACM.	Soft	Dry	0.7	BH04_0.1		
0.2								
0.4		Silty CLAY: Low plasticity, red coloured clay mixed with silt, friable and loose.	Loose	Dry	0.5	BH04_0.5 QA03 QA04		
0.6								
0.8								
1					0.5	BH04_1.0		
1.2								
1.4		Change to orange colour then light brown						
1.6								
1.8								
2					0.6	BH04_2.0		
2.2								
2.4								
2.6								
2.8					0.6	BH04_2.8		
		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH05

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.7 mbgl	**COORD SYS** E540160, N6109944
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Initially dark brown silt then lighter colour. Low plasticity clay. No odours/stains/ACM.	Soft	Dry	0.4	BH05_0.1		
0.2								
0.4		Silty CLAY: Medium plasticity, orange/light brown stiff clay. Some silts. No odours/stains/ACM.	Stiff	D/M	0.6	BH05_0.5		
0.6								
0.8								
1					0.6	BH05_1.0		
		Appearance of some lighter grey mottle & red	Stiff					
1.2								
1.4								
			Loose					
1.6								
		Some gravels, hard and small (<1 cm)		Dry				
1.8								
2		Light brown, crumbles			0.5	BH05_2.0		
2.2								
2.4								
		Dark black mottle, no odour, possible organic mottle						
2.6					0.3	BH05_2.7		
2.8		Termination Depth at: 2.7 mbgl. Refusal.						

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SOIL BORE LOG BH06

PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.6 mbgl	**COORD SYS** E540560, N6109883
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, light brown silt, soft, mixed with low plasticity brown clay. Rootlets. No odours/stains/ACM.	Soft	Dry	0.4	BH06_0.1		
0.2								
		Silty CLAY: Low plasticity brown clay. Red/orange mottle. No odours/stains/ACM. Some rootlets/roots observed.	Hard, friable	Dry				
0.4					0.4	BH06_0.5		
0.6								
0.8								
1					0.4	BH06_1.0		
1.2								
1.4		Dryer/whiter layer of clay						
		Brown colour						
1.6								
1.8								
2					0.5	BH06_2.0		
2.2								
2.4								
2.6					0.4	BH06_2.6		
		Termination Depth at: 2.6 mbgl. Refusal.						
2.8								

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SOIL BORE LOG BH07

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 3.0 mbgl	**COORD SYS** E540392, N6109716
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Soft, fine brown silt mixed with low plasticity brown clay. No odours/stains/ACM.	Soft	Dry	0.3	BH07_0.1		
0.2		Silty CLAY: Low plasticity, hard loose light brown clay with grey/orange/red areas of mottle throughout. Some white mottle also. No odours/stains/ACM.	Hard	Dry				
0.4					0.4	BH07_0.5		
0.6								
0.8								
1								
1.2								
1.4								
1.6								
1.8								
2		Light grey predominant colour. No odours/stains/ACM.	Hard / loose		0.4	BH07_2.0		
2.2								
2.4								
2.6								
2.8								
3		Termination Depth at: 3.0 mbgl. End of investigation.						

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SOIL BORE LOG BH08

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 3.0 mbgl	**COORD SYS** E540771, N6109577
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Soft, fine dark brown silt with low plasticity clay. A lof of rootlets. No odours/stains/ACM.	Soft	Dry	0.3	BH08_0.1		
0.2								
0.4		Silty CLAY: Low plasticity brown clay with brown silt fines. Some white/red & some black mottle. No odours/stains/ACM.	Hard / loose	Dry	0.4	BH08_0.5		
0.6								
0.8								
1					0.3	BH08_1.0		
1.2								
1.4								
1.6		Some light grey mottles. No odours/stains/ACM.						
1.8								
2								
2.2								
2.4								
2.6								
2.8								
3		Termination Depth at: 3.0 mbgl. End of investigation.						

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SOIL BORE LOG BH09

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.7 mbgl	**COORD SYS** E541102, N6109469
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Dark brown fine silt mixed with low plasticity brown clay. No odours/stains/ACM.	Soft	Dry	0.3	BH09_0.1		
0.2								
0.4		Silty CLAY: Low plasticity, hard crumbly clay, very dry, light brown/orange coloured. Silt is soft, brown and fine. No odours/stains/ACM.	Hard / loose	Dry	0.4	BH09_0.5		
0.6								
0.8								
1								
1.2		@1.2m - Red mottlle observed						
1.4								
1.6								
1.8								
2		Colour change in clay to light brown/greyish white. No odours/stains/ACM.	Loose/ hard		0.2	BH09_2.0		
2.2								
2.4								
2.6								
2.8		Termination Depth at: 2.7 mbgl. Refusal.						

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SOIL BORE LOG BH10

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E541449, N6109441
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Dark brown coloured silt.	Soft/ loose	Dry				
0.2		Colour change to light brown. Soft, fine silts with clay, low plasticity. No odours/stains/ACM.			0.4	BH10_0.1		
0.4		Silty CLAY: Low plasticity light brown clay with red and orange mottle mixed with fine silts.	Hard/ loose	Dry				
0.6					0.5	BH10_0.5		
0.8								
1		Some dark black mottle. No odour.			0.5	BH10_1.0		
1.2								
1.4								
1.6								
1.8								
2								
2.2								
2.4								
2.6		Some small (<1 cm) angular,black gravels. No odours/stains.						
2.8					0.4	BH10_2.6		
		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH11

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.9 mbgl	**COORD SYS** E541192, N6109273
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine dark brown silt mixed with low plasticity brown clay. Organics and roots observed. No odour/stains/ACM.	Soft/ loose	Dry	0.3	BH11_0.1		
0.2								
0.4		Gravely silty CLAY: Low plasticity brown clay with fine brown silts. Some small < 1 cm black, angular gravels. No odour/stains/ACM.	Hard/ loose	Dry	0.3	BH11_0.5		
0.6								
0.8		Silty CLAY: Low plasticity, brown/light brown, hard and loose clay with some fine brown silts. No odour/stains/ACM.	Hard/ loose	Dry				
1								
1.2								
1.4								
1.6								
		Roots observed						
1.8								
2		Clay is now low-medium plasticity, light brown. No odours/stains.	Stiff	D/M	0.3	BH11_2.0		
2.2								
2.4								
			Very stiff					
2.6								
2.8								
		Termination Depth at: 2.9 mbgl. Refusal.						

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SOIL BORE LOG BH12

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.9 mbgl	**COORD SYS** E540767, N6109298
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Fine, soft, dark brown silt with dark brown, low plasticity clay. No odour/stains/ACM.	Soft	Dry	0.3	BH12_0.1		
0.2								
0.4		Gravely silty CLAY: Low plasticit, hard, crumbly loose clay. Dark brown becoming lighter with depth. Some fine well sorted silt, occasional small (<1 cm) black, angular gravels. No odour/stains/ACM.	Hard/ loose	Dry	0.5	BH12_0.5		
0.6								
0.8								
1					0.7	BH12_1.0		
1.2								
1.4								
		Red/orange mottle	loose/ hard					
1.6								
1.8								
2					0.7	BH12_2.0		
2.2								
2.4								
2.6								
2.8					0.4	BH12_2.9		
		Termination Depth at: 2.9 mbgl. Refusal.						

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SOIL BORE LOG BH13

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 1.5 mbgl	**COORD SYS** E540352, N6109189
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Initially soft, dark brown silt with some brown clay. Silt becoming increasing hard/packed with greater depth. No odour/stains/ACM.	Soft	Dry	0.3	BH13_0.1		
0.2								
0.4					0.4	BH13_0.5		
0.6								
		Silt colour change to light brown. No odours/stains/ACM.	Hard/ loose					
0.8								
1								
1.2								
1.4					0.3	BH13_1.5		
		Termination Depth at: 1.5 mbgl. Refusal.						
1.6								
1.8								
2								
2.2								
2.4								
2.6								
2.8								

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SOIL BORE LOG BH14

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.9 mbgl	**COORD SYS** E540582, N6109045
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Dark brown becoming light brown, soft, fine, silts with low plasticity brown clay. Rootlets. No odours/stains/ACM.	Soft	Dry	0.2	BH14_0.1		
0.2								
0.4								
		Silty CLAY: Light brown/red/dark black clay mottle. Low plasticity with some fine brown silt. No odours/stains/ACM.	Loose/ hard	Dry	0.3	BH14_0.5		
0.6								
0.8								
1					0.5	BH14_1.0		
1.2								
1.4								
1.6								
1.8								
2		Light grey mottle						
2.2								
2.4								
2.6								
2.8					0.1	BH14_2.9		
		Termination Depth at: 2.9 mbgl. Refusal.						

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SOIL BORE LOG BH15

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E541199, N6108949
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Soft, light brown, fine silts with low plasticity clay. Some rootlets observed. No odours/stains/ACM.	Soft/ loose	Dry	0.4	BH15_0.1 QA05 QA06		
0.2								
0.4		Silty CLAY: Low plasticity light brown clay with red/orange mottle. Hard & loose. No odours/stains/ACM.	Hard/ loose	Dry	0.6	BH15_0.5		
0.6								
0.8								
1					0.7	BH15_1.0		
1.2								
1.4		Some grey mottle observed throughout.						
		Some areas of black mottle with some small (<1 cm), angular gravels. No odours/stains/ACM.						
1.6								
1.8								
2								
2.2								
2.4								
2.6								
2.8					0.6	BH15_2.8		
		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH16

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.8 mbgl	**COORD SYS** E541288, N6108766
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Soft, fine dark brown silt with dark red/red clay. Low plasticity clay. Some rootlets. No odours/stains/ACM.	Soft	Dry	0.3	BH16_0.1		
0.2								
0.4								
		Silty CLAY: Low plasticity brown clay mixed with fine silts. Red & grey mottle throughout. Some organics, rootlets. No odours/stains/ACM.	Hard/ loose	Dry	0.4	BH16_0.5		
0.6								
0.8								
1					0.4	BH16_1.0		
1.2								
1.4		Some white mottle observed						
1.6								
1.8								
2					0.3	BH16_2.0		
2.2								
		White mottle predominate colour. No odours/stains/ACM.	Hard/ loose					
2.4								
2.6								
2.8		Termination Depth at: 2.8 mbgl. Refusal.						

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SOIL BORE LOG BH17

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 2.9 mbgl	**COORD SYS** E540886, N6108844
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Soft, fine dark brown silt with low plasticity clay. No odours/stains/ACM.	Soft	Dry	0.3	BH17_0.1		
0.2		Silty CLAY: Medium plasticity light brown clay mixed with silts. Some organics, roots. No odours/stains/ACM.	Stiff	D/M	0.4	BH17_0.5		
0.4								
0.6								
0.8								
1		Low plasticity, loose/hard clay with red/brown/black mottle. No odours/stains/ACM.	Hard/ loose	Dry				
1.2								
1.4								
1.6								
1.8								
2		Some white mottle			0.3	BH17_2.0		
2.2								
2.4								
2.6								
2.8								
		Termination Depth at: 2.9 mbgl. Refusal.						

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SOIL BORE LOG BH18

PROJECT NUMBER J200300	**DRILLING DATE** 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 3.0 mbgl	**COORD SYS** E540434, N6108952
CLIENT Wakefield Ashurst Development	**DIAMETER** N/A	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** N/A	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** N/A	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
	Push Tube	Clayey SILT: Light brown/orange very fine & soft poorly sorted silt with some clay. Rootlets. No odours/stains/ACM.	Soft	Dry	0.0	BH18_0.1		
0.2								
0.4					0.1	BH18_0.5		
0.6		Silty CLAY: Almost a 50/50 silt/clay mix but clay predominately & increasing with depth, very hard and loose. No odours/stains/ACM.	Loose/ hard	Dry				
0.8								
1								
1.2								
1.4								
		Silt is now a white colour with clay still brown/grey/red mottle. No odours/stains/ACM.						
1.6								
1.8								
2					0.1	BH18_2.0		
2.2								
2.4								
2.6								
2.8								
3		Termination Depth at: 3.0 mbgl. End of investigation.						

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Appendix E

Groundwater well borelogs

GROUNDWATER BORE LOG MW01

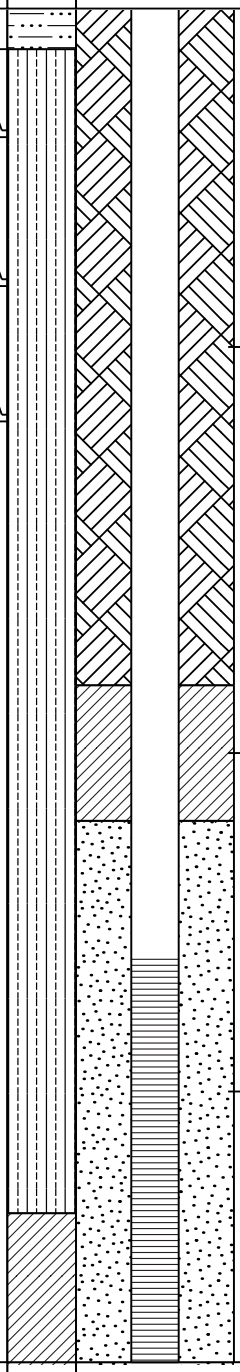
PROJECT NUMBER J200300	**DRILLING DATE** 13/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 10 mbgl	**COORD SYS** E541327, N6110538
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 184.08 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 185.033 mAHD

COMMENTS

LOGGED BY A. Tennant
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Sonic	Clayey SILT: Brown. No odour/staining/ACM.	Sft	D	0	MW01_0.05
0.5		Silty CLAY: Low plasticity, brown. No odour/staining/ACM.	VSt/ Fri	D		
		Orange			0.1	MW01_0.9
1						
		Brown	Vst/ Fri			
1.5		Orange	Vst/ Fri			
2					0.1	MW01_2.0
2.5						
3					0	MW01_3.0
		Brown				
3.5		Orange	Vst/ Fri			
4		Brown	VSt/ St			
4.5						
5						
5.5						
6						
6.5		Orange and grey mottle, with trace of fine gravels.	Sft			
7			Vst			
7.5						
8		Light brown with grey mottle.				
8.5						
9		CLAY: Low plasticity, light brown. With some coarse grained sand. No odour/staining/ACM.				
9.5						
10		Termination Depth at:10 mbgl. Target depth reached. Static water level 8.535 mbgl.				
10.5						

Graphic Log



Well Diagram

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GROUNDWATER BORE LOG MW02A

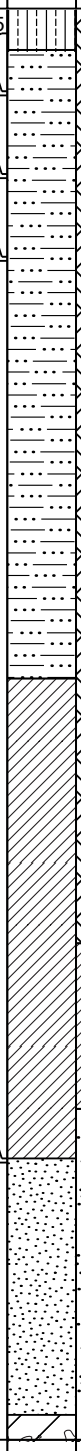
PROJECT NUMBER J200300	**DRILLING DATE** 12/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 17.3 mbgl	**COORD SYS** E541150, N6110346
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 184.59 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 185.597 mAHD

COMMENTS

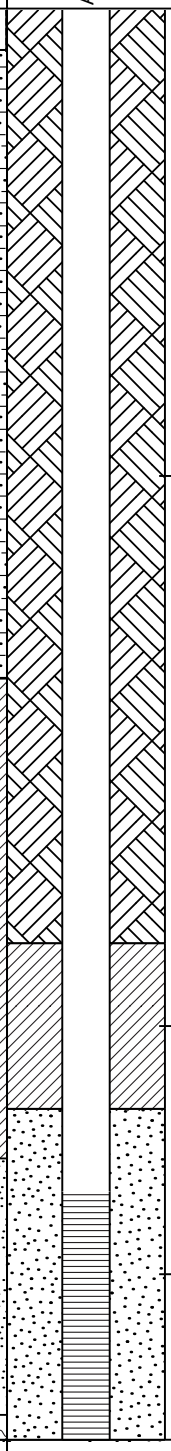
LOGGED BY A. Tennant
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Sonic	Silty CLAY: Low plasticity, brown. No odour/staining/ACM.	St	D	0	MW02A_0.05
1		Clayey SILT: Brown, clay is low plasticity. No odour/staining/ACM.	Sft	D	1.3	MW02A_1.0
2					0.7	MW02A_2.0
3					0.6	MW02A_3.0
4						
5						
6						
7						
8		CLAY: Medium plasticity, brown with orange and grey mottle. No odour/staining/ACM.	St	D		
9						
10						
11						
12						
13						
14		SAND: medium grained, brown. No odour/staining/ACM.	UnC	W	0.0	MW02A-13.9
15						
16						
17		Clayey, sandy GRAVEL: Grey, medium grained, clay is low plasticity, sand is medium to coarse grained.	UnC	W		
		Termination Depth at:17.3 mbgl. Target depth reached. Static water level 15.105 mbgl.				

Graphic Log



Well Diagram



GROUNDWATER BORE LOG MW02B

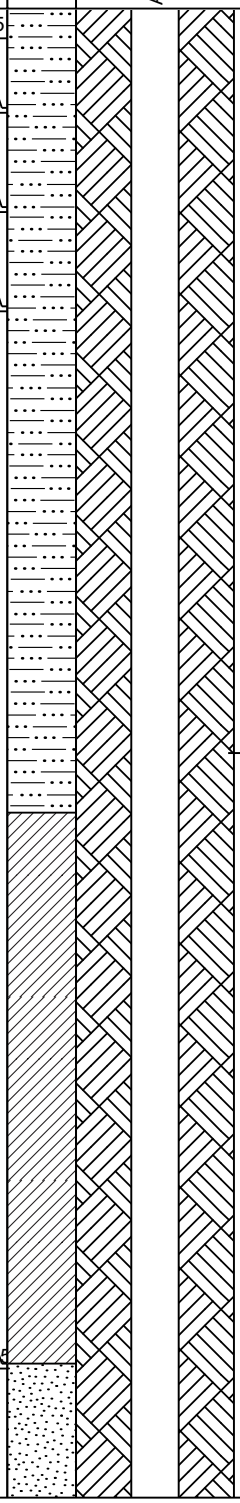
PROJECT NUMBER J200300	**DRILLING DATE** 10/06/2020 - 11/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 35.3 mbgl	**COORD SYS** E541158, N6110355
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 184.29 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 185.087 mAHD

COMMENTS

LOGGED BY A. Tennant
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Sonic	Clayey SILT: Dark brown, low plasticity clay. No odour / Brown	Soft	D	0.1	MW02B_0.05
			Fri/ Soft			
1			Stiff/ Fri		0	MW02B_1.0
2			VSt/ Fri		0	MW02B_2.0
3					0	MW02B_3.0
4						
5						
		Light brown	Vst/ Fri			
6						
7						
8		CLAY: Medium plasticity, brown with grey and orange mottle, with some coarse grained sand and fine grained gravels. No odour/staining/ACM.	VSt	D		
9		No sand or gravels				
10						
11						
12						
13						MW02A-13.65
14		SAND: fine to medium grained, brown. With some low plasticity clay. No odour/staining/ACM.	UnC	M / W	0	
15						

Graphic Log



Well Diagram

GROUNDWATER BORE LOG MW02B

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
16		Fine to coarse grain						
17		Clayey, gravely SAND: Fine to medium grained, grey, gravel is fine grained, clay is low plasticity. No odour/staining/ACM.	UnC	W				
18		Clayey, sandy GRAVEL: Fine grained, orange, sand is coarse grained, clay is low plasticity. No odour/staining/ACM.	UnC	W				
19								
20		Grey Fine to medium grained gravel						
21		SAND: Medium to coarse grained (mostly coarse grained), grey. No odour/staining/ACM.	UnC	W				
22								Cement grout
23								
24		CLAY: High plasticity, brown. No odour/staining/ACM. Grey	St	M				
25		SAND: Medium to coarse grained, grey. No odour / staining / ACM. with some fine gravels sand is fine to medium grained. Orange mottle (25.1-25.2)	UnC	W				
26		Medium to coarse grained sand with some fine grained gravels						
27		Sandy GRAVEL: Fine grained (some medium grained), grey, sand is coarse grained. No odour/staining/ACM.	UnC	W				
28								
29		GRAVEL: medium grained (with some fined grains), grey. No odour/staining/ACM.	UnC	W				
30		SAND: fine to medium grained, grey. No odour/staining/ACM.	UnC	W				
31		Clayey SAND: fine grained, brown and grey, clay is medium plasticity. No odour/staining/ACM.	UnC	M to W				Bentonite
32		SAND: coarse grained, orange and brown. No odour/staining/ACM. Medium to coarse grained, grey (32.3)	UnC	W				Graded sand pack

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GROUNDWATER BORE LOG MW02B

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
33								A
34								Graded sand pack
35		Some fine gravels						
		Termination Depth at:35.3 mbgl. Target depth reached. Static water level 14.982 mbgl.						
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

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GROUNDWATER BORE LOG MW03A

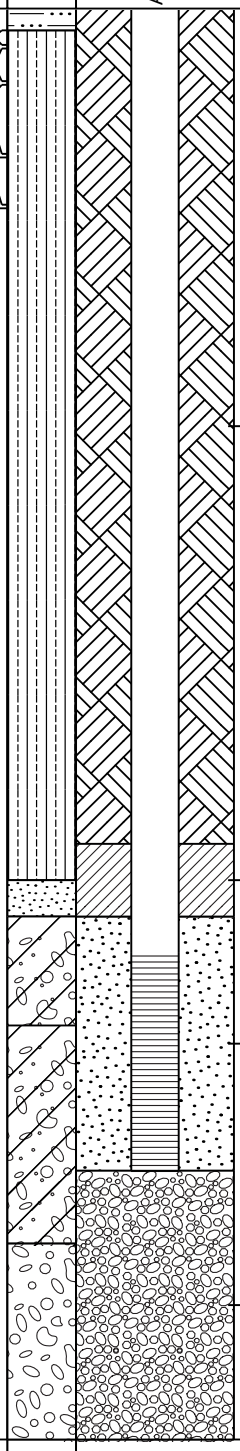
PROJECT NUMBER J200300	**DRILLING DATE** 9/06/2020-10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 19.7 mbgl	**COORD SYS** E540817, N6110259
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 184.18 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 185.106 mAHD

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Push tube	Clayey SILT: Silts with fine, soft light brown clay material. No odour/staining/ACM.	Soft	D	0	MW03A_0.1
			Stiff	D	0.0	MW03A_0.5
1		Silty CLAY: Light brown/orange clay, low-medium plasticity. No odour/staining/ACM.			0	MW03A_1.0
2					0	MW03A_2.0
		Red & dark brown mottled clay	VStiff			
					0	MW03A_2.7
3	Solid stem		Friable hard			
4		Some small (<1 cm) rounded gravels	Loose	D		
5	Air	Light brown medium plasticity clay with silts. No odour/staining/ACM.	Soft	D		
6						
7						
		Red mottle with increase in plasticity to medium	Firm	D		
8						
9						
		Grey clay mottle		D		
10		Medium to high plasticity grey clays with light brown mottle. No odour/staining/ACM.	Stiff	D		
11						
12		SAND: Fine, poorly sorted light brown sand, some lighter grains. No odour/staining/ACM.	Soft/ loose	D/M		
13	Solid stem	Clayey gravely SAND: Fine sand as above with some med (1-3cm) sized, sub-rounded to rounded gravels.	Soft	D/M		
14		Clayey gravely SAND: Fine-coarse sand with gravels. Some clay content. Brown-light brown	Loose	W		
15						
16						
17		Sandy GRAVEL: Hard, large (>5 cm) river pebbles wth fine sand mixed throughout.	Loose	W		
18						
19						
20		Termination Depth at:19.7 mbgl. Target depth reached. Static water level 14.5 mbgl.				

Graphic Log



Well Diagram

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GROUNDWATER BORE LOG MW03B

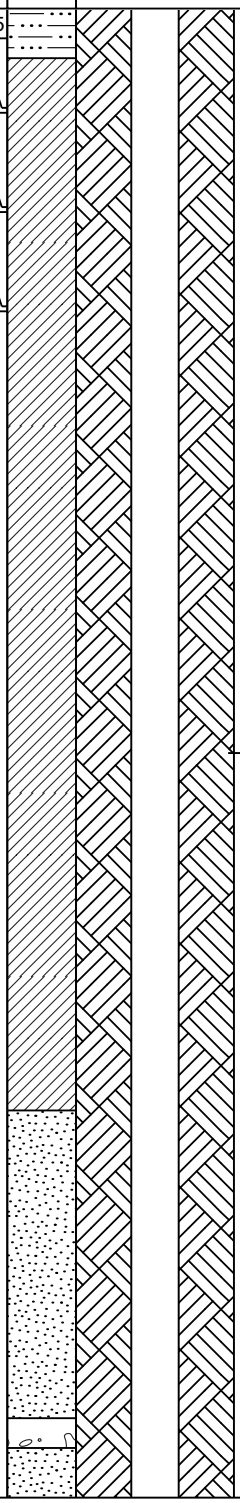
PROJECT NUMBER J200300	**DRILLING DATE** 09/06/2020 - 10/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 35.3 mbgl	**COORD SYS** E540786, N6110266
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 184.06 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 184.912 mAHD

COMMENTS

LOGGED BY A. Tennant
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Sonic	Clayey SILT: Brown. No odour/staining/ACM.	F	D	0.8	MW03B_0.05
1		Silty CLAY: Low plasticity, brown. No odour/staining/ACM.	VSt/ F	D	0.7	MW03B_1.0
		Light brown (1.2)				
2					0.7	MW03B_2.0
3					0.7	MW03B_3.0
4						
5		Medium-high plasticity, minor coarse grained sand, black and white mottle (4.5)	VSt/ F			
		Light brown				
6						
7						
		Light brown with grey mottle (7.2)	VSt/ F			
8						
9						
10						
11		SAND: brown, very fine to coarse grained. No odour/staining/ACM.	UnC	M		
12						
13						
14		Gravely SAND: Very fine to coarse grained, brown, gravel is fine grained. No odour/staining/ACM.	UnC	M		
15		SAND: Medium to coarse grained, brown. No odour/staining/ACM.	UnC	M		

Graphic Log



Well Diagram

GROUNDWATER BORE LOG MW03B

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
16								
17		Sandy GRAVEL: Fine grained (some medium grained), grey, medium to coarse grained sand. No odour/staining/ACM.	UnC	W				
18		SAND: Coarse grained, orange. No odour / staining / ACM.	UnC	W				
		CLAY: Medium plasticity, greyn. No odour/staining/ACM.	St	M				
19		Clayey SAND: Medium to coarse grained, orange, medium plasticity clay. No odour/staining/ACM.	UnC	M				
20		Clay, low plasticity. No odour/stains/ACM.	St	M				
21		Clayey, gravelly SAND: Medium to coarse grained, low plasticity clay, fine grained gravel, light brown/grey.	UnC	W				Cement grout
22		Orange (22.6-22.7)						
23		Orange/brown (22.7-24.8)						
24								
25		Orange (24.8-25.1) Higher clay content, grey						
26		Clayer sandy GRAVEL: Fine grained, grey, low plasticity clay, medium to coarse grained sand. No odour/staininig/ACM.	UnC	W				
27		CLAY: Medium plasticity, grey	VSt	M				
28		Sandy GRAVEL: fine grained, orange, medium to coarse grained sand. No odour/staining/ACM.	UnC	W				
29		SAND: fine to coarse grained, grey.	UnC	W				Bentonite
30								
31		some clay (30.7-31.5)						Graded sand pack
32		Fine to medium grained (mostly fines), grey, some fined grained gravels						

GROUNDWATER BORE LOG MW03B

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples	Graphic Log	Well Diagram
33								
34		Sandy GRAVEL: Fine grained with some medium grains, orange, sand is coarse grained. No odour/staining/ACM.	UnC	W				Graded sand pack
35		Fine to medium grained gravel, grey, fine to coarse grained sand.						
		Termination Depth at:35.3 mbgl. Target depth reached. Static water level 15.060 mbgl.						
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								

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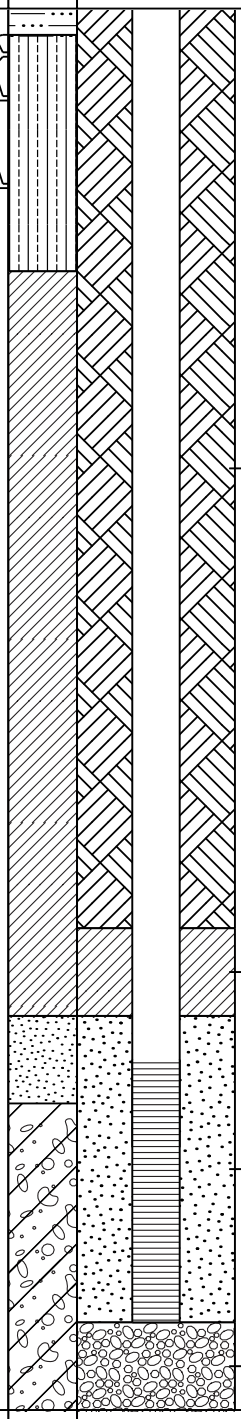
GROUNDWATER BORE LOG MW04

PROJECT NUMBER J200300	**DRILLING DATE** 13/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 16 mbgl	**COORD SYS** E540462, N6110285
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION** Stick up
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION** 183.630 mAHD
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC** 184.604 mAHD

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Push tube	Clayey SILT: Silts with fine, soft light brown clay material. No odour/staining/ACM.	Soft	D	0.3	MW04_0.1
			Stiff	D	0.4	MW04_0.5
1		Silty CLAY: Light brown/orange clay, low-medium plasticity. No odour/staining/ACM.			0.4	MW04_1.0
		Red & dark brown mottled clay, some white gravels	VStiff	D		
2					0.3	MW04_2.0
3	Solid stem	CLAY: Light brown. No odour/staining/ACM.	Friable hard	D		
4						
5						
6						
7						
8						
9						
10						
11						
12		SAND: brown colour, med sized gravels (approx. 3-5 cm). No odour/staining/ACM.	Soft/ loose	D/M		
13		Gravely clayey SAND: Fine sand with small-large subrounded to rounded gravels. Some clay.	Soft	D/M		
14				W		
15						
16		CLAY: High plasticity, light brown/orange				
		Termination Depth at:16 mbgl. Target depth reached. Static water level 14.5 mbgl.				



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GROUNDWATER BORE LOG MW05

PROJECT NUMBER J200300	**DRILLING DATE** 12/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 15 mbgl	**COORD SYS** E541430, N6109281
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC**

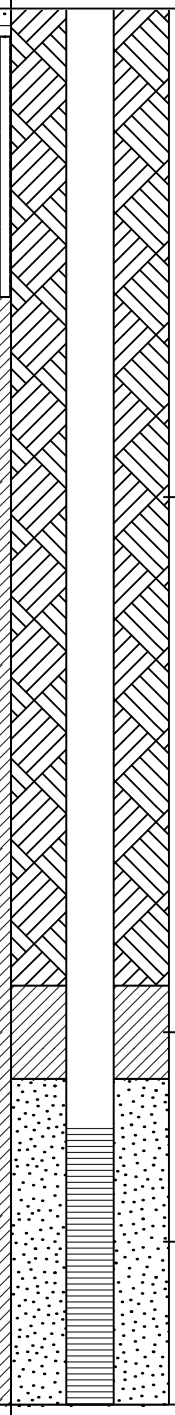
COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Push tube	Clayey SILT: Dark brown, fine and soft silts with low pasticity brown clay. No odour/staining/ACM.	Soft	D	0.2	MW05_0.1
1	Solid auger	Silty CLAY: Low plasticity light brown clay, hard loose with silt fines. No odour/staining/ACM.	Hard/ loose	D	0.3 0.4	MW05_0.5 QA07 QA08 MW05_1.0
2		light brown clay, plasticity increases to low-medium. Red/grey and white mottle. No odour/staining/ACM.	VStiff			
3					0.5	MW05_2.8
4		CLAY: Medium plasticity brown/grey clay with some dark brown mottle. No sult content anymore. No odour/staining/ACM.	Stiff	D		
7		Predominant colour in clay is now light brown/grey. No odour/staining/AVM.	Stiff	D		
13		Plasticity drop to low-medium. Becoming harder.	Hard	D		
15		Termination Depth at:15.0 mbgl. Target depth reached. No water encountered during drilling however end of max depth of investigation, so GW well installed to 15.0 mbgl.				

Graphic Log

Well Diagram



Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 25 Jun 2020

GROUNDWATER BORE LOG MW06

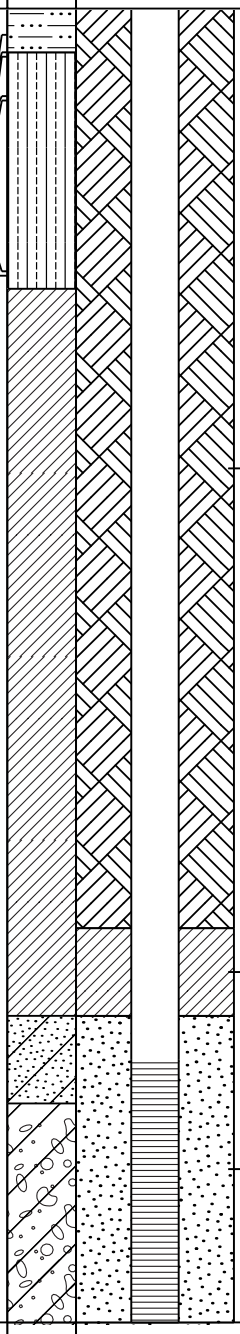
PROJECT NUMBER J200300	**DRILLING DATE** 12/06/2020 - 13/06/2020	**COORDINATES**
PROJECT NAME Brunslea Park DSI	**TOTAL DEPTH** 15 mbgl	**COORD SYS** E541323, N6108871
CLIENT Wakefield Ashurst Development	**DIAMETER** 50mm	**COMPLETION**
ADDRESS Brunslea Park, Forest Hill NSW 2651	**CASING** uPVC	**SURFACE ELEVATION**
LICENCE NO.	**SCREEN** uPVC Factory Slotted	**WELL TOC**

COMMENTS

LOGGED BY D. Condon
CHECKED BY D. Condon

Depth (m)	Drilling Method	Soil Description	Consistency / Density	Moisture	PID	Samples
	Push tube	Clayey SILT: Soft, fine, poorly sorted dark brown silt with low plasticity brown clay. No odour/staining/ACM.	Soft	D	0.4	MW06_0.1
1	Push tube	Silty CLAY: Low plasticity light brown clay, with dark brown/red mottle. Some silt throughout. No odour/staining/ACM.	Hard/ loose	D	0.3	QA09 QA10
					0.3	MW06_0.5 MW06_1.0
3	Air Hamm				0.3	MW06_3.0
4	Solid Stem	CLAY: Low-medium plasticity light brown/grey clay with some red/orange/dark brown mottle. No sult content anymore. No odour/staining/ACM.	Hard	D		
8		Clay chips are extremely hard, almost rocklike. Light brown colour.	Very hard, Friable			
12		Sandy silty CLAY: Low plasticity brown/orange clay with angular sand grains throughout mixed with some orange silt fines. No odour/staining/ACM.	Very loose	D		
13		Gravely sandy CLAY: As above mixed with smal sub-angular to angular gravels. Large (4cm) gravels conglomerate sedimentary gravel, some quartz. Silty layer	Loose	D		
15		Termination Depth at:15.0 mbgl. Target depth reached. From 12.5mbgl onwards the geology is interbedded layers of sand/silts/clays/gravels - all mixed together with various % of each major. @~10mbgl air method is not able to bring cuttings to surface. Possible voids in the borehole but geology suggest otherwise. Switched back to soild stem augers.				

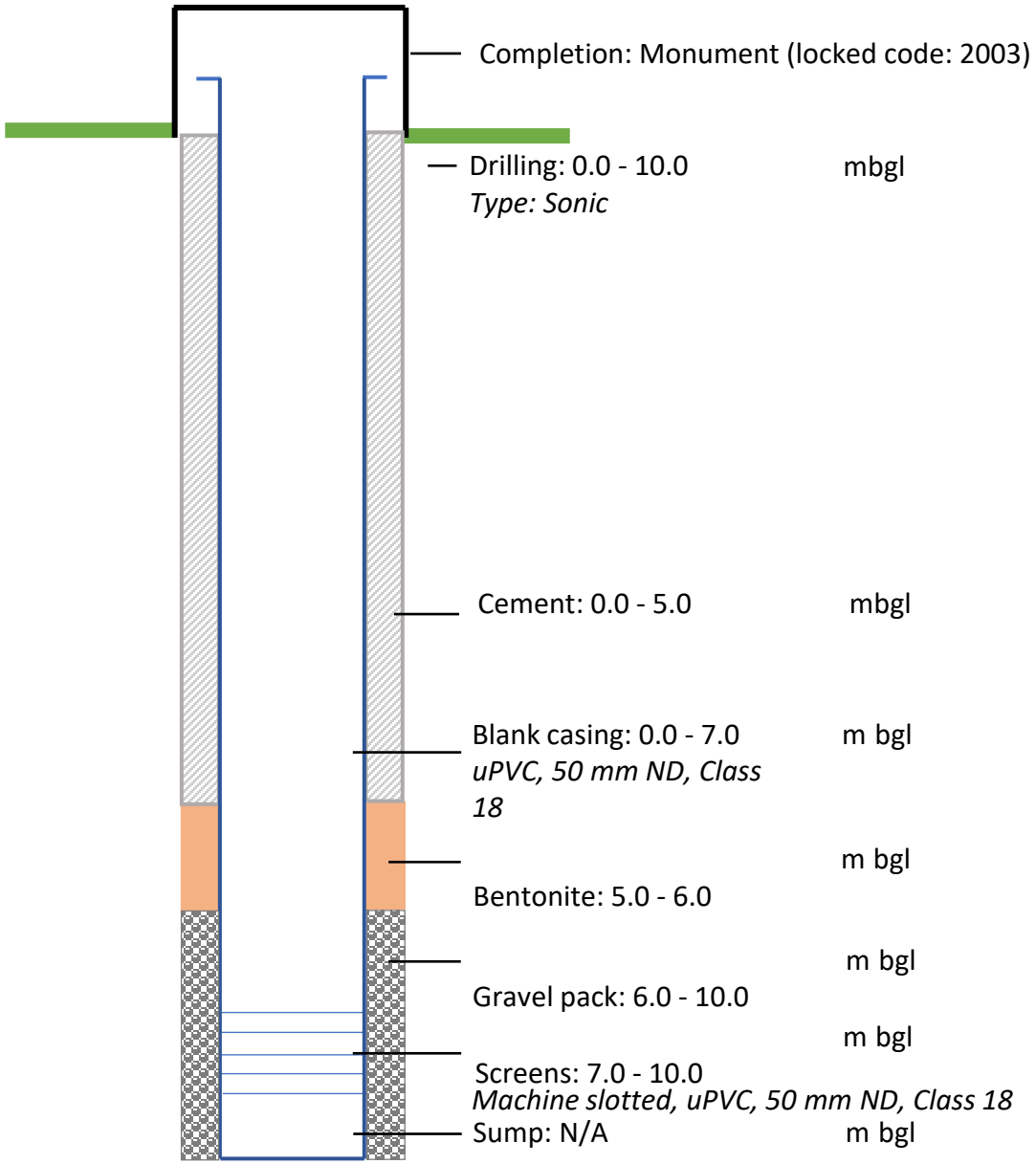
Graphic Log



Well Diagram

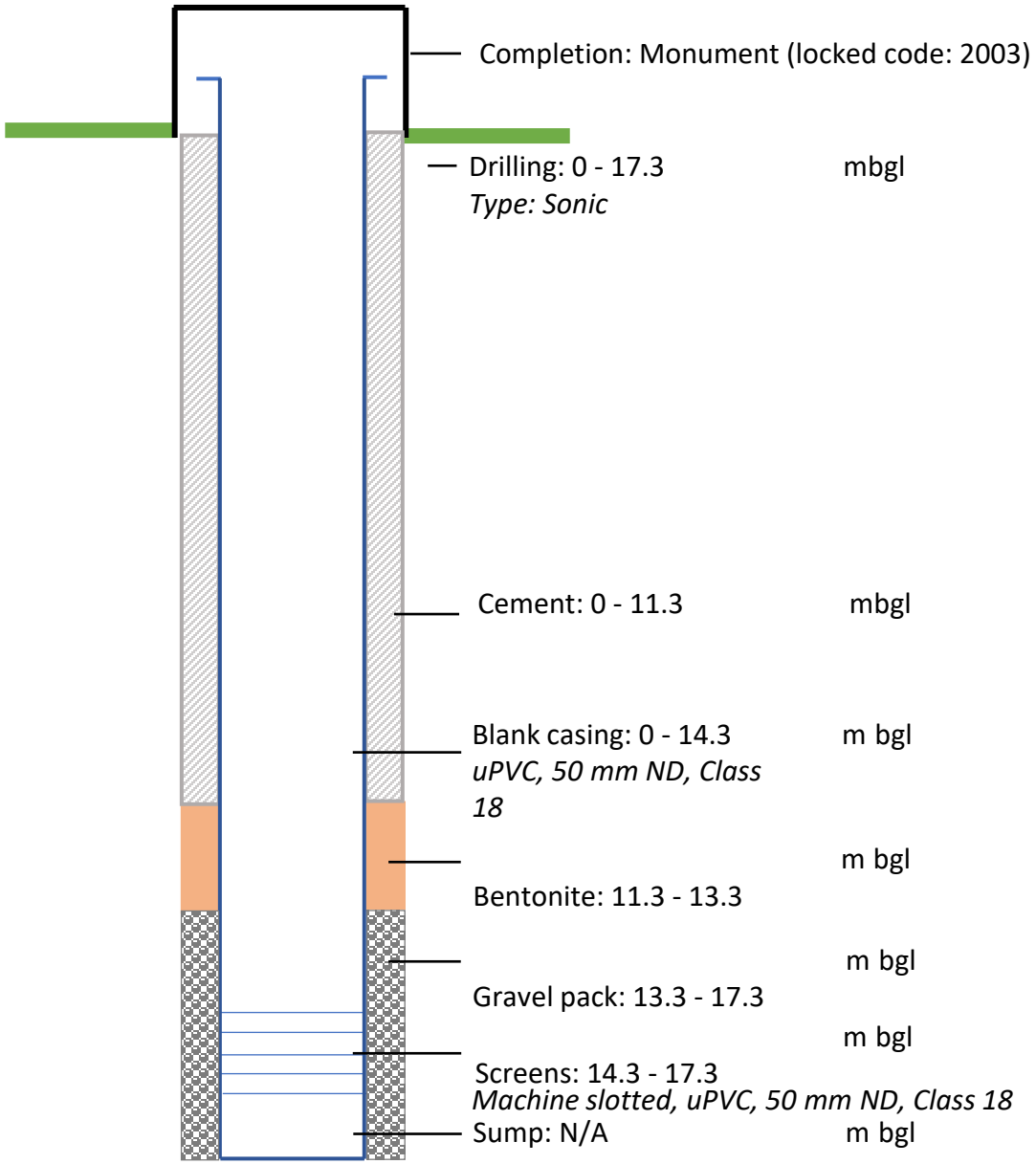
Appendix F

Groundwater well construction



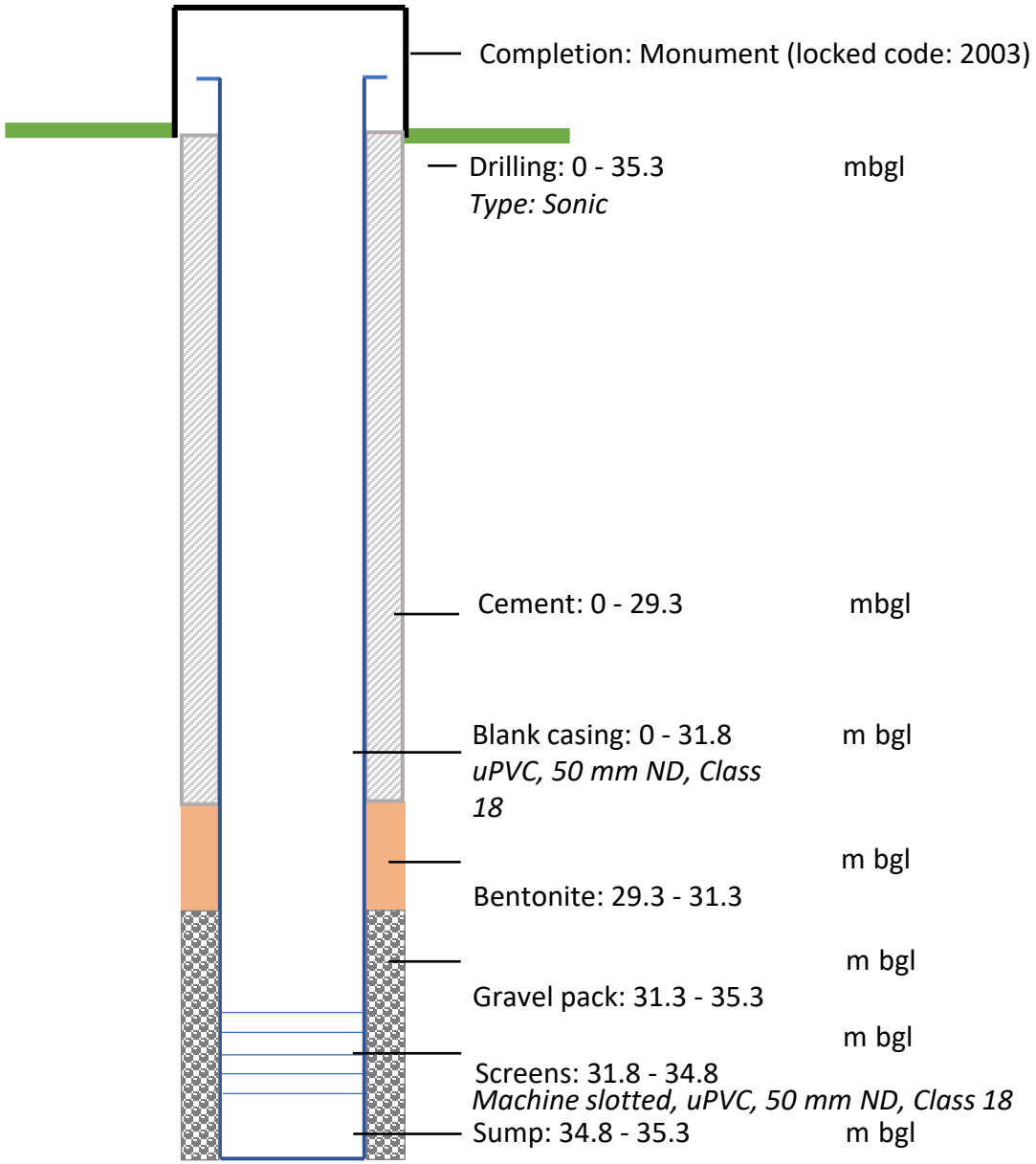
Borehole ID	**MW01**
Site	Brunslea Park DSI
Date	13/06/2020
EMM Field Technician	Alex Tennant

Geology	**From**	**To**
Silt/Clay	0.0	10



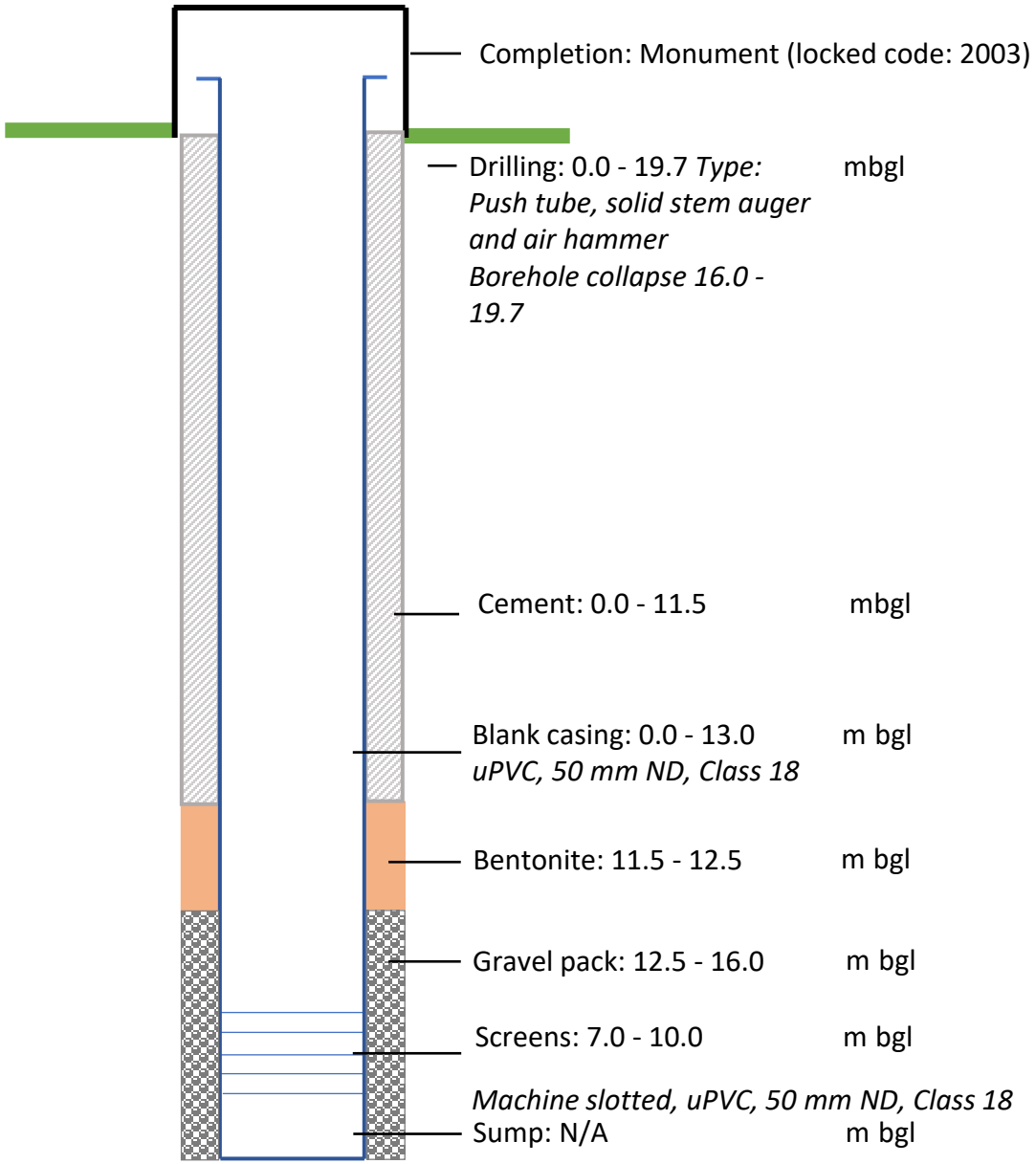
Borehole ID	**MW02A**
Site	Brunslea Park DSI
Date	12/06/2020
EMM Field Technician	Alex Tennant

Geology	**From**	**To**
Silt/Clay	0.0	13.9
Sand/Gravel	13.9	17.3



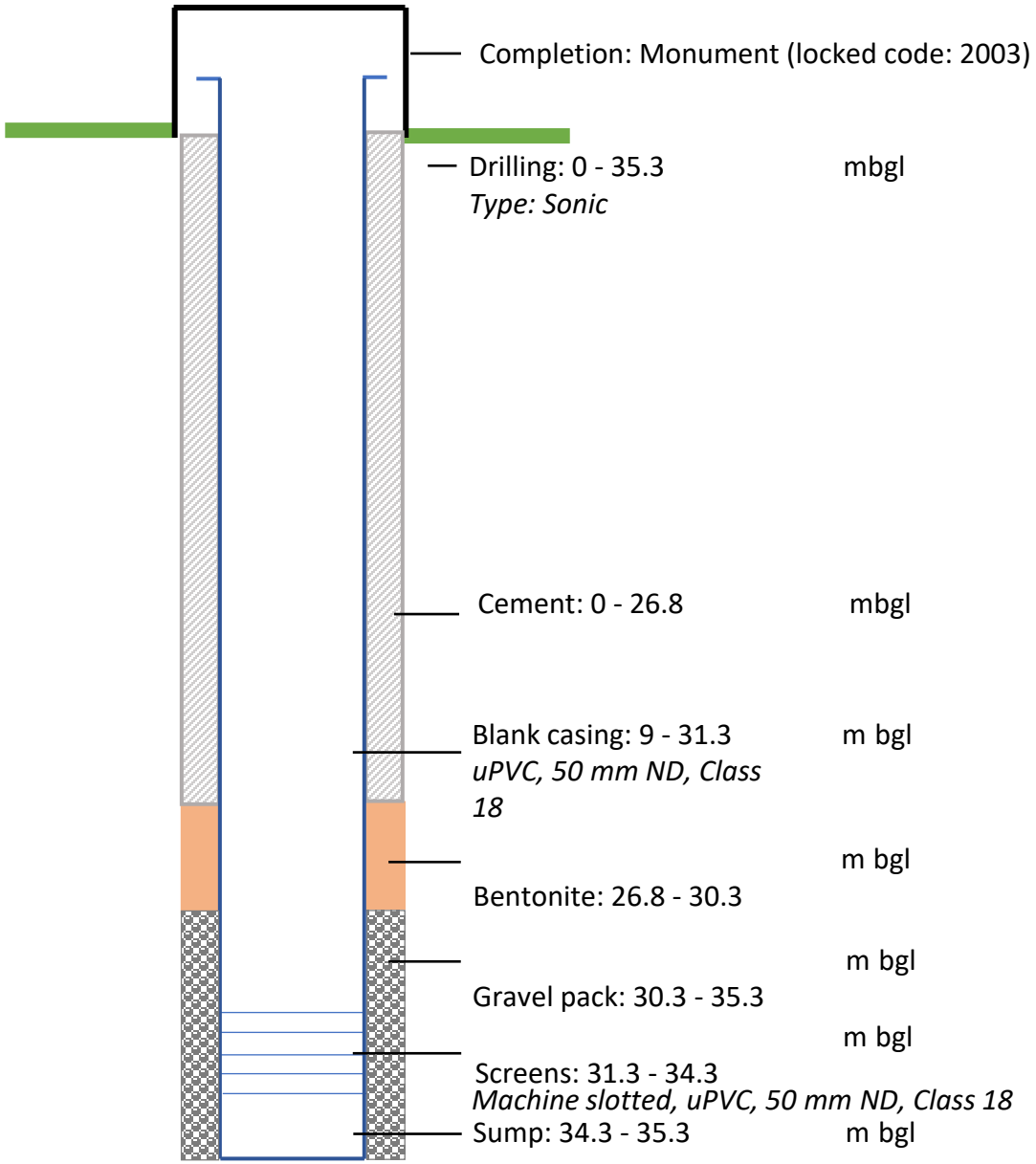
Borehole ID	**MW02B**
Site	Brunslea Park DSI
Date	11/06/2020
EMM Field Technician	Alex Tennant

Geology	**From**	**To**
Silt/Clay	0.0	13.65
Sand/Gravel	13.65	23.2
Clay	23.2	24.4
Sand/Gravel	24.4	30.3
Clayey SAND	30.3	32.2
Sand/Gravel	32.2	35.3



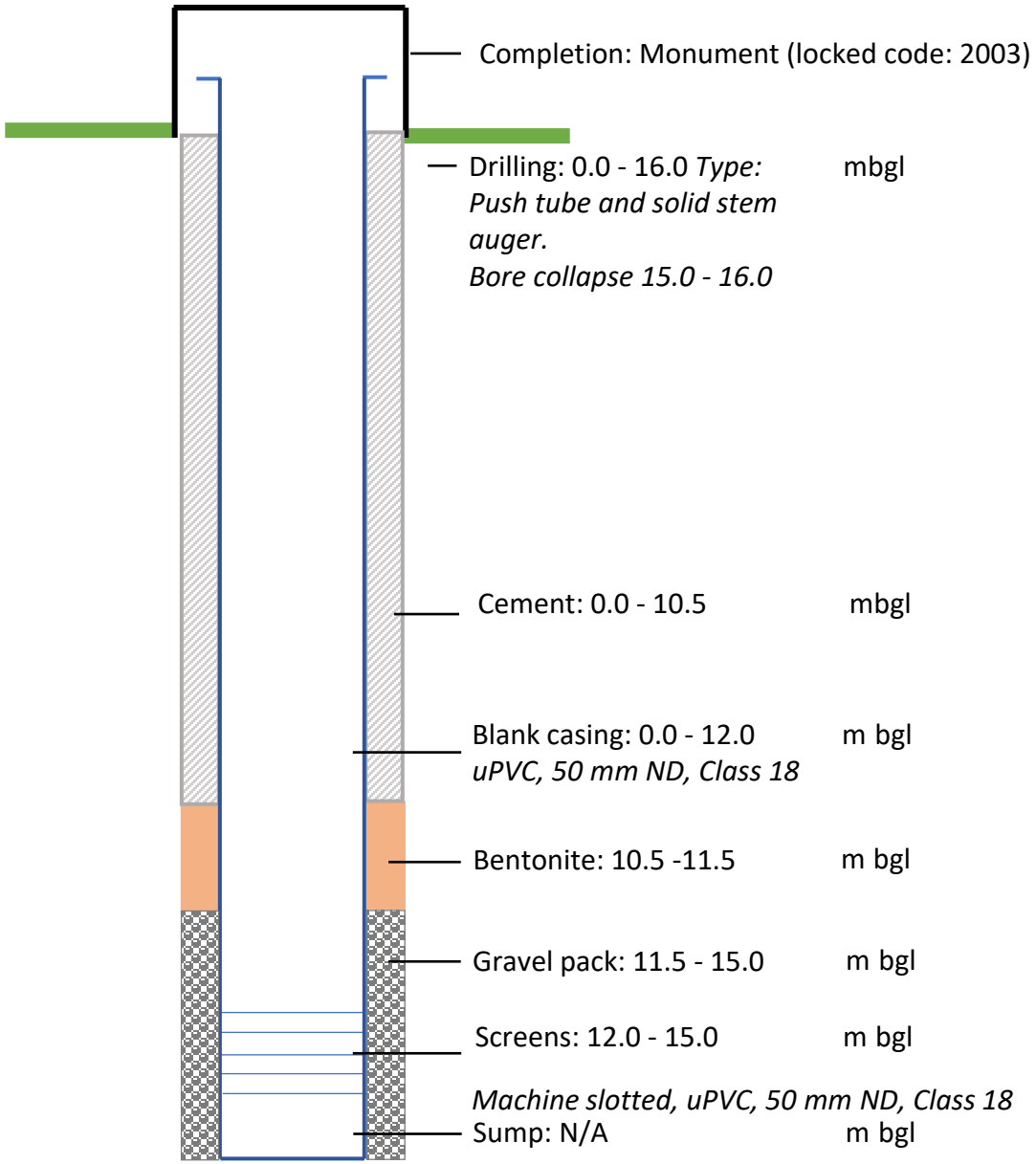
Borehole ID	**MW03A**
Site	Brunslea Park DSI
Date	10/06/2020
EMM Field Technician	Daniel Condon

Geology	**From**	**To**
Silt/Clay	0.0	12.0
Sand	12.0	17.0
Gravel	17.0	19.7



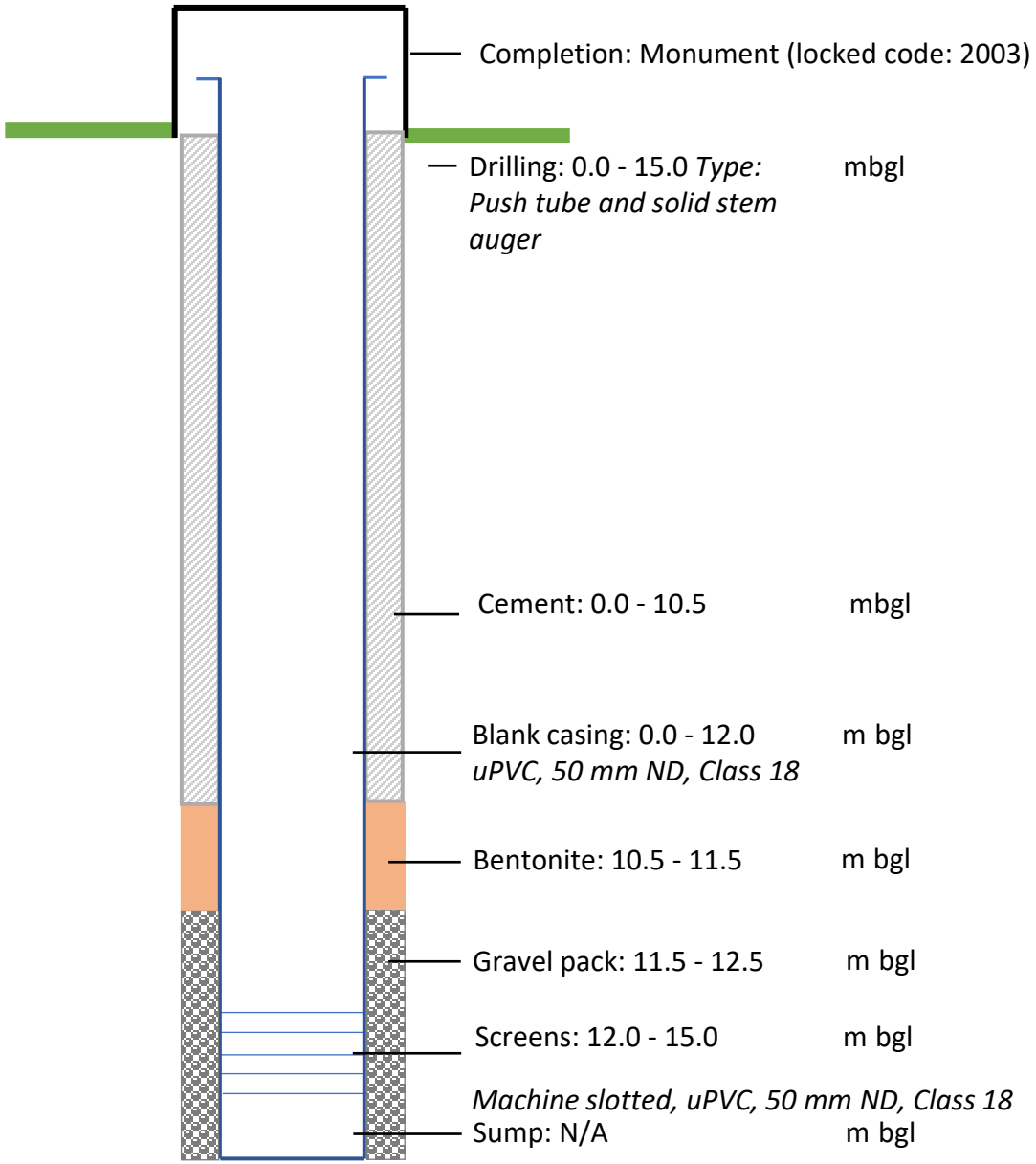
Borehole ID	**MW03B**
Site	Brunslea Park DSI
Date	10/06/2020
EMM Field Technician	Alex Tennant

Geology	**From**	**To**
Silt/Clay	0.0	11.1
Sand/Gravel	11.1	18.6
Clay	18.6	20.6
Sand/Gravel	20.6	26.4
Clay	26.4	27.3
Sand/Gravel	27.3	35.3



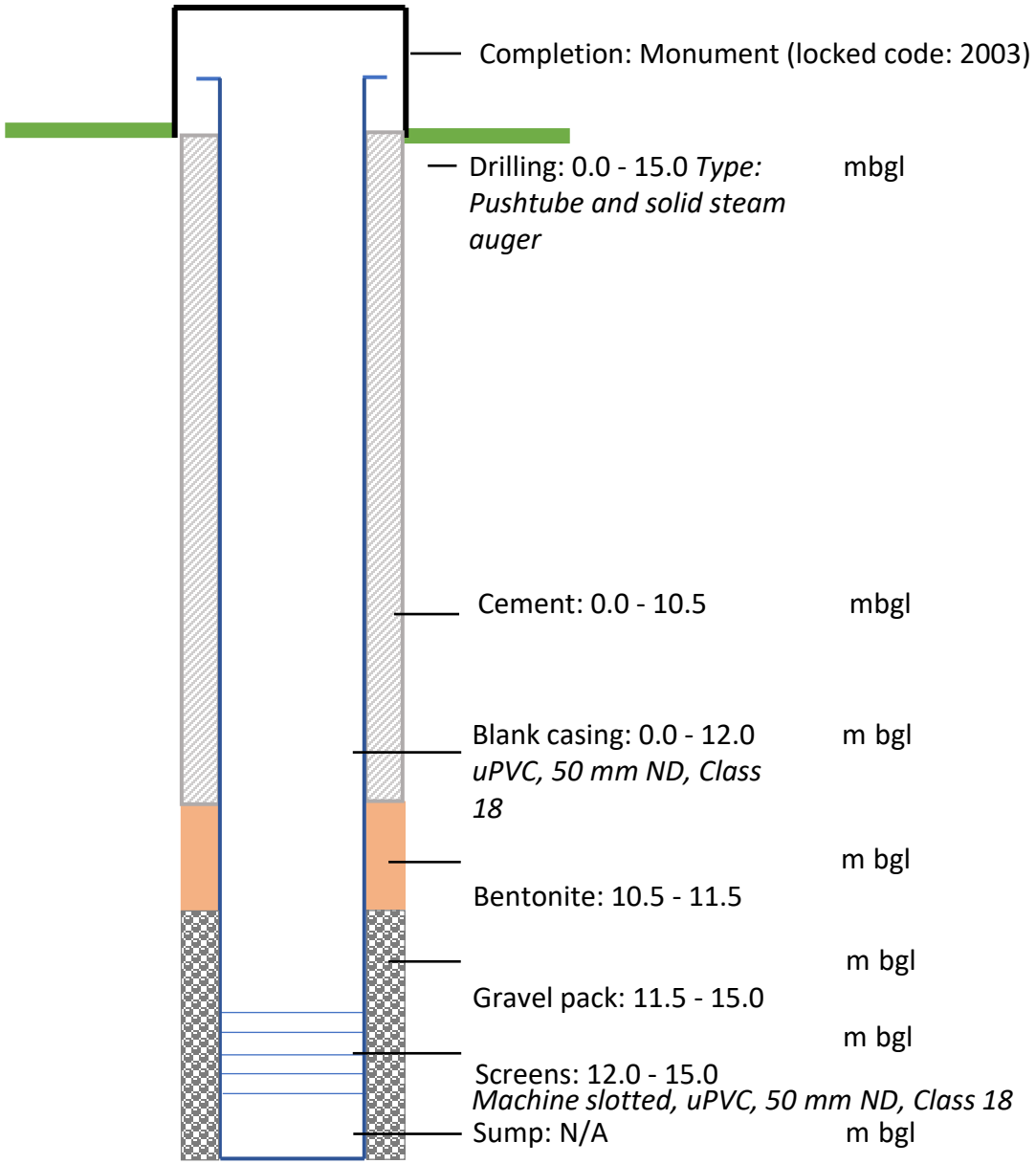
Borehole ID	**MW04**
Site	Brunslea Park DSI
Date	13/06/2020
EMM Field Technician	Daniel Condon

Geology	**From**	**To**
Silt/Clay	0.0	11.5
SAND	11.5	12.5
Gravely clayey SAND	12.5	16.0



Borehole ID	**MW05**
Site	Brunslea Park DSI
Date	12/06/2020
EMM Field Technician	Daniel Condon

Geology	**From**	**To**
Silt/Clay	0.0	15.0



Borehole ID	**MW06**
Site	Brunslea Park DSI
Date	13/06/2020
EMM Field Technician	Daniel Condon

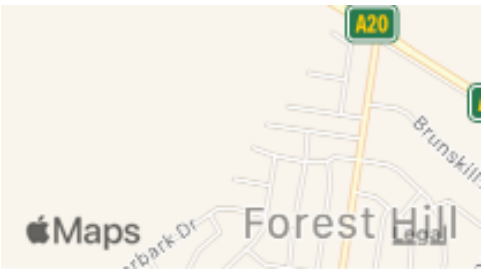
Geology	**From**	**To**
Silt/Clay	0.0	11.5
Sandy gravely CLAY	11.5	15.0

Appendix G

Groundwater development field forms

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	14 June 2020 at 10:42 am
Attendees :	DC
EMM Technician:	DC
Well ID:	MW01

Site location:	Brunslea Park
Location:	
	-35.14720 147.45370

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:	11.000	mbtoc
Diameter of standpipe (mm):	50	Top of Screen:	8.000	mbtoc
Standpipe stick up (m):	1.0	Bottom of Screen:	11.000	mbtoc
Surveyed reference point:	TOC	SWL:	8.535	mbtoc

Well Development Information

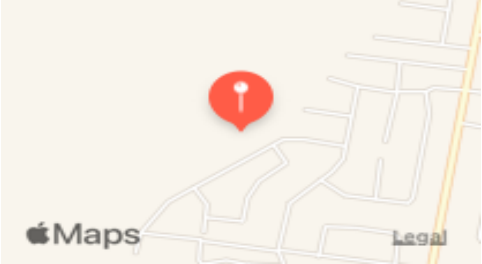
Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
11:06 am	5		8.80	1622	173.6	88.7	17.9
11:10 am	10		8.79	1692	163.7	89.2	17.9

Appearance Observations:

Cloudy white, no odour, low turbidity
Developed with bailer. Purged dry

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	14 June 2020 at 8:10 am
Attendees :	DC, Gav, Mitch
EMM Technician:	DC
Well ID:	MW02a

Site location:	Brunslea Park
Location:	
	-35.14895 147.45177

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:	18.400	mbtoc
Diameter of standpipe (mm):	50	Top of Screen:	15.400	mbtoc
Standpipe stick up (m):		Bottom of Screen:	18.400	mbtoc
Surveyed reference point:	TOC	SWL:	15.105	mbtoc

Well Development Information

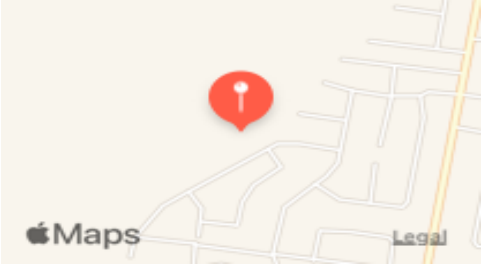
Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
8:20 am	10		7.40	512.7	137.7	76.8	17.3
8:28 am	15		7.78	490.6	148.6	84.5	15.5

Appearance Observations:

Initially medium-high turbidity. Brown water with brown suspended solids, no odour no sheen.
Black solids on top of water - likely associated with well construction.
Turbidity decreasing slightly at 15L

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	14 June 2020 at 7:37 am
Attendees :	DC, Gav, Mitch
EMM Technician:	DC
Well ID:	MW02b

Site location:	Brunslea Park
Location:	
	-35.14884 147.45191

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:	34.30	mbtoc
Diameter of standpipe (mm):	50	Top of Screen:	31.30	mbtoc
Standpipe stick up (m):	0.8	Bottom of Screen:	34.30	mbtoc
Surveyed reference point:	TOC	SWL:	14.982	mbtoc

Well Development Information

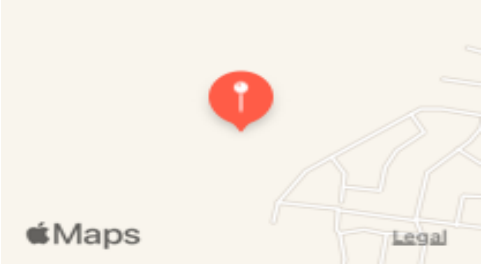
Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
7:56 am	25		11.67	3757	80.9	74.8	18.7
8:01 am	100		8.81	677	116.7	85.6	18.9
8:05 am	150		8.35	589	134.6	77.6	19.5
8:07 am	200						

Appearance Observations:

Initially brown medium turbidity water with suspended solids. Very high pH confirmed by both water quality meters. No significant odours, no sheen
Final appearance low - medium turbidity, slight brown colour. No odour, sheens

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	13 June 2020 at 12:56 pm
Attendees :	DC
EMM Technician:	DC
Well ID:	MW03a

Site location:	Brunslea Park
Location:	
	-35.14978 147.44812

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:	16.70	mbtoc
Diameter of standpipe (mm):	50	Top of Screen:	13.70	mbtoc
Standpipe stick up (m):	1.0	Bottom of Screen:	16.70	mbtoc
Surveyed reference point:	TOC	SWL:	15.185	mbtoc

Well Development Information

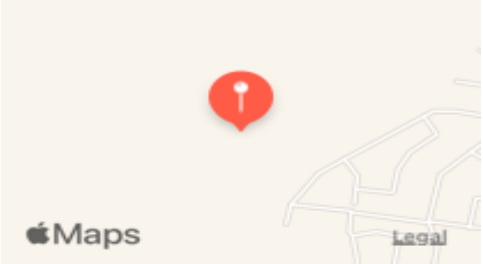
Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
1:21 pm	3		6.61	1342	115.5	40.6	19.5
1:29 pm	8		7.40	1076	169.6	85.7	18.8
1:33 pm	12		8.10	1178	157.5	81.0	23.0
1:36 pm	15	15.195	8.20	1177	157.7	78.9	24.4

Appearance Observations:

Medium - high turbidity, brown colour, no odour, no sheen
Turbidity decreasing at 5-6L purged

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	13 June 2020 at 1:49 pm
Attendees :	DC
EMM Technician:	DC
Well ID:	MW03b

Site location:	Brunslea Park
Location:	
	-35.14972 147.44778

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:		mbtoc
Diameter of standpipe (mm):	50	Top of Screen:		mbtoc
Standpipe stick up (m):	1.0	Bottom of Screen:		mbtoc
Surveyed reference point:	TOC	SWL:	15.040	mbtoc

Well Development Information

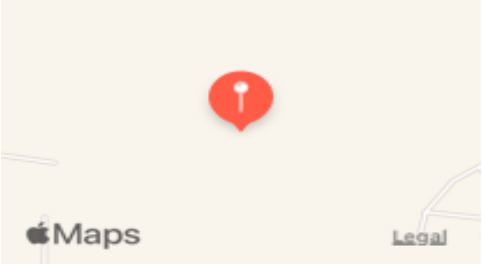
Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
1:53 pm	30		7.31	853	114.7	98.4	19.3
1:55 pm	80		7.66	802	118.7	100.1	19.7
1:57 pm	140		7.77	696	120.2	97.8	19.7

Appearance Observations:

Grey coloured medium turbidity water, no odour, no sheen
Turbidity decreasing to low after around 150L purged

GROUNDWATER WELL DEVELOPMENT RECORD FORM

Job No.:	J200300
Date & Time on site:	14 June 2020 at 9:35 am
Attendees :	DC and AT
EMM Technician:	DC and AT
Well ID:	MW04

Site location:	Brunslea Park
Location:	
	-35.14952 147.44422

WELL INFORMATION

Well Maintenance Required?:	No	Total Depth of Well:	16.000	mbtoc
Diameter of standpipe (mm):	50	Top of Screen:	13.000	mbtoc
Standpipe stick up (m):	0.85	Bottom of Screen:	16.000	mbtoc
Surveyed reference point:	TOC	SWL:	14.923	mbtoc

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
9:44 am	1.5		6.84	3663	148.8	6.80	17.2
9:47 am	2.5		6.92	3709	144.2	5.89	17.4
9:49 am	2.7	0.0	6.96	3611	146.1	6.91	17.3

Appearance Observations: Brown, turbid, silty. Bailed until dry.

Appendix H

Groundwater gauging field forms

NAPL AND GROUNDWATER LEVEL GAUGING RECORD

Project Name:	Brunslea Park PSI	**Project Location:**	Forest Hill, NSW	**PM Name:**	Dan Condon
Project Number:	605200300	**Client:**	Yarraman Developments	**Fieldwork Staff Name:**	Lachlan Lewis

Confirm NAPL and groundwater levels by repeat measurements. All columns must be completed. If NAPL is not present in a well write 'ND' (Not Detected) in the relevant column.

FIELD DATA

Well ID	Date (dd/mm/yy)	Time (24hr:mm)	PID Reading (ppm)	Depth to LNAPL (mBTOC)	Depth to Groundwater (mBTOC)	LNAPL Thickness (m)	Depth to DNAPL (mBTOC)	Total Well Depth (mBTOC)	DNAPL Thickness (m)	Comments (well condition, odour, NAPL colour and viscosity)
MW06	15/6/20	13:20	0.0	ND	ND		ND	15.981		dry
MW05	"	13:35	0.1	ND	ND		ND	15.992		dry
MW02B	"	13:55	0.2	ND	15.001		ND	33.943		
MW02A	"	14:00	0.8	ND	15.470		ND	18.322		
MW03B	"	14:30	13.6	ND	15.075		ND	36.477		
MW03A	"	14:35	1.2	ND	15.205		ND	16.955		
MW04	"	14:45	0.2	ND	14.941		ND	15.974		
MW01	"	15:05	0.2	ND	9.09		ND	10.873		

MEASUREMENT EQUIPMENT

Make & Model:	Heron H.OIL	**Supplier:**	WAM Scientific
Serial No.:		**Calibration Report Provided?**	Y

NOTES/COMMENTS

(PID) - photo ionisation detector; (ppm) - parts per million; (LNAPL) - light non-aqueous phase liquids; (DNAPL) - dense light non-aqueous phase liquid; (mBTOC) - metres below top of casing

Approval and Distribution

Fieldwork Staff Signature _____ Date _____

Project Manager Signature _____ Date _____

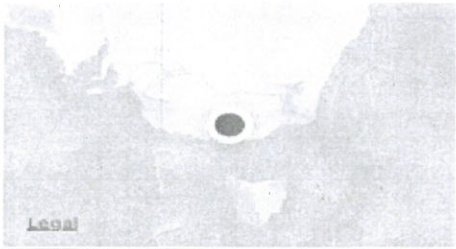
Distribution: Project Central File

Appendix I

Groundwater sampling field forms

GROUNDWATER WELL SAMPLING RECORD FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	17/6/20	Location:	
Attendees :	L Lewis		
EMM Technician:	12		
Well iD:	MW01		Forest Hill NSW

WELL INFORMATION

Refer to gauging sheet.

Diameter of standpipe (mm):		Total Depth of Well:		mbtoc
Standpipe stick up (m):	1	Top of Screen:		mbtoc
Surveyed reference point:	TOC + GS	Bottom of Screen:		mbtoc
LNAPL detected:	–	Thickness of LNAPL:		mbtoc

EQUIPMENT INFORMATION

Depth of Pump:		mbtoc	Drive:		Sec
Depth to water after pump placement:	7.335	mbtoc	Vent:		Sec
Length of Tubing:	9.3	m	Throttle:		PSI

Purging and sampling method:	– low flow peri-pump	Controller Info:	Geopump
WQM model:	– YSI		

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
7:34	0.1	7.535	7.65	2662	-148.8	5.09	13.9
7:37	0.5	7.649	7.89	2568	141.0	3.70	15.7
7:40	0.9	7.805	7.87	2488	139.3	3.50	15.6
7:43	1.3	7.923	7.83	2456	139.9	3.82	15.6
7:46	1.7	7.998	7.77	2398	139.1	3.70	15.6

Depth to water at end of purging (mBTOC):

Depth to water after collection of samples (mBTOC): 8.086

Appearance Observations: clear, no O/S

QC200

GROUNDWATER WELL SAMPLING RECORD FORM

EMM
creating opportunities

Job No.:	3200300	Site location:	
Date & Time on site:	15/6/20	Location:	
Attendees :	L Lewis		
EMM Technician:	"		
Well ID:	MW02a		Brunslea Park

WELL INFORMATION

Diameter of standpipe (mm):	50	Total Depth of Well:		mbtoc
Standpipe stick up (m):	1	Top of Screen:		mbtoc
Surveyed reference point:		Bottom of Screen:		mbtoc
LNAPL detected:	–	Thickness of LNAPL:	–	mbtoc

EQUIPMENT INFORMATION

Depth of Pump:	17	mbtoc	Drive:	7.4	Sec
Depth to water after pump placement:		mbtoc	Vent:	3.6	Sec
Length of Tubing:		m	Throttle:	~~35~~ 40	PSI

Purging and sampling method:	– low flow micropurge	Controller Info:	QED
WQM model:	– YSI		

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
15:55	0.1	15.489	6.94	757	114.1	4.40	17.9
15:58	0.4	15.551	7.04	763	81.3	2.70	18.1
16:01	0.7	15.540	7.04	767	64.0	2.30	18.1
16:04	1.0		7.04	768	59.3	1.66	18.3
16:08	1.4	15.550	7.06	769	54.0	1.53	18.4

Depth to water at end of purging (mBTOC):

Depth to water after collection of samples (mBTOC): 15.531

Appearance Observations: Cloudy, ~~slight~~ light brown then silty brown, No O/S.

GROUNDWATER WELL SAMPLING RECORD FORM

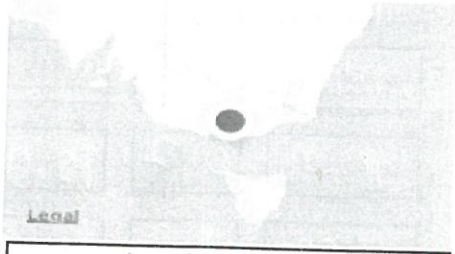
EMM
creating opportunities

Job No.: J200300

Site location: Brunslea Park

Date & Time on site: 16/6/20

Location:



Forest Hill NSW

Attendees : S Dillon + L Lewis

EMM Technician: " "

Well ID: MW02B

WELL INFORMATION

Diameter of standpipe (mm): 50

Standpipe stick up (m): 1

Surveyed reference point:

LNAPL detected: –

Total Depth of Well: mbtoc

Top of Screen: mbtoc

Bottom of Screen: mbtoc

Thickness of LNAPL: mbtoc

EQUIPMENT INFORMATION

Depth of Pump: 31.09 mbtoc

Depth to water ~~after~~ before pump placement: 15.011 mbtoc

Length of Tubing: m

Drive: 3.8 Sec

Vent: 7.2 Sec

Throttle: 60 PSI

Purging and sampling method: – low flow micropurge

Controller Info: QED

WQM model: – YSI

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
11:43	0.1	15.010	9.23	597	102.6	2.82	19.3
11:46	0.4		8.77	616	98.4	2.09	18.7
11:49	0.7	15.012	8.74	620	96.5	1.87	18.9
11:52	1.0	15.010	8.69	625	93.8	1.80	19.0
11:55	1.3		8.70	626	91.0	1.76	19.1

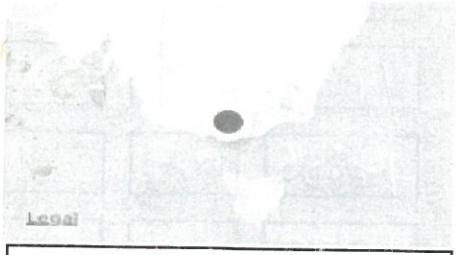
Depth to water at end of purging (mBTOC): 1

Depth to water after collection of samples (mBTOC): 15.010

Appearance Observations: clear, no O/S.

GROUNDWATER WELL SAMPLING RECORD FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	18/6/20	Location:	
Attendees :	S Dillon + C Lewis		
EMM Technician:	" "		
Well ID:	MW03a		

WELL INFORMATION

Diameter of standpipe (mm):		Total Depth of Well:		mbtoc
Standpipe stick up (m):		Top of Screen:		mbtoc
Surveyed reference point:		Bottom of Screen:		mbtoc
LNAPL detected:	–	Thickness of LNAPL:		mbtoc

EQUIPMENT INFORMATION

Depth of Pump:		mbtoc	Drive:	6.8	Sec
Depth to water after pump placement:	15.21	mbtoc	Vent:	3.2	Sec
Length of Tubing:		m	Throttle:	30	PSI

Purging and sampling method:	– Micropurge	Controller Info:	QED
WQM model:	– YSI		

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
14:30	0.1		6.93	1173	93.7	3.57	19.0
14:33	0.4	15.214	6.96	1173	93.8	3.50	18.9
14:36	0.7		7.02	1172	93.6	3.31	18.7
14:39	1.0	15.220	7.06	1169	93.9	3.41	18.8
14:42	1.3	15.215	7.11	1169	94.1	3.50	18.8

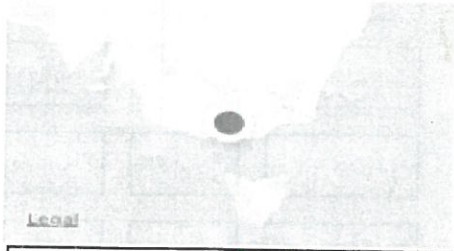
Depth to water at end of purging (mBTOC):

Depth to water after collection of samples (mBTOC): 15.217

Appearance Observations: silty brown, no O/S.

GROUNDWATER WELL SAMPLING RECORD FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	16/6/20	Location:	
Attendees :	L Lenso + S Dillon		
EMM Technician:	" "		
Well ID:	MW036		Forest Hill NSW

WELL INFORMATION

Diameter of standpipe (mm):		Total Depth of Well:		mbtoc
Standpipe stick up (m):		Top of Screen:		mbtoc
Surveyed reference point:		Bottom of Screen:		mbtoc
LNAPL detected:	–	Thickness of LNAPL:		mbtoc

EQUIPMENT INFORMATION

Depth of Pump:	35.2	mbtoc	Drive:	~~62~~ 3.8	Sec
Depth to water ~~after~~ before pump placement:	15.083	mbtoc	Vent:	8.2	Sec
Length of Tubing:		m	Throttle:	66	PSI
Purging and sampling method:	– low flow ~~peristaltic~~ micropurge		Controller Info:	QED	
WQM model:	– YSI				

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
13:06	0.1		7.60	701	108.2	10.71	18.4
13:09	0.4	15.082	7.31	865	108.5	5.38	18.2
13:12	0.7	15.086	7.28	1117	106.1	2.47	18.3
13:15	1.0	15.090	7.10	1141	98.6	1.63	18.2
13:18	1.3	15.087	7.04	1267	62.7	1.76	18.5
13:21	1.6	15.084	7.06	1290	48.7	1.23	18.3
13:24	1.9	15.081	7.06	1292	42.2	1.21	18.5
13:27	2.2	15.080	7.06	1297	38.7	0.99	18.4

Depth to water at end of purging (mBTOC): 16.777

Depth to water after collection of samples (mBTOC): 15.080

Appearance Observations: clear, no g/s

* QC103 *

GROUNDWATER WELL SAMPLING RECORD FORM

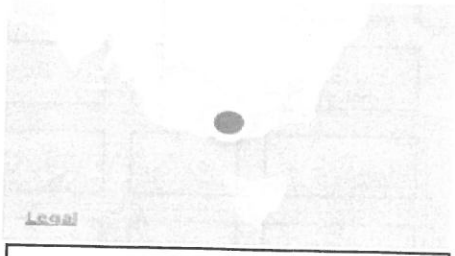
EMM
creating opportunities

Job No.: 5200029

Site location: Brunslea Park

Date & Time on site: 16/6/20

Location:



Attendees : L Lewis

EMM Technician: "

Well ID: MW04

WELL INFORMATION

Diameter of standpipe (mm):

Total Depth of Well: mbtoc

Standpipe stick up (m):

Top of Screen: mbtoc

Surveyed reference point:

Bottom of Screen: mbtoc

LNAPL detected: –

Thickness of LNAPL: mbtoc

EQUIPMENT INFORMATION

Depth of Pump: mbtoc

Drive: 3.2 Sec

Depth to water ~~after~~ before pump placement: 14.94 mbtoc

Vent: 7.8 Sec

Length of Tubing: m

Throttle: 30 PSI

Purging and sampling method: –

Controller Info: QED

WQM model: – YSI

Well Development Information

Time	Volume	SWL	pH	Conductivity	Redox	DO	Temperature
	L	mbtoc	Units	us/cm	mV	Mg/L	Deg Celcius
16:05	0.1	15.00	6.88	3790	113.9	5.04	18.5
16:08	0.4		6.87	3799	113.0	5.13	18.4
16:11	0.7	15.002	6.86	3807	113.7	5.45	18.2
16:14	1.0	14.995	6.86	3804	113.7	5.57	18.0
16:17	1.3	14.994	6.67	3791	113.8	5.48	17.7

Depth to water at end of purging (mBTOC):

Depth to water after collection of samples (mBTOC): 14.98

Appearance Observations: Silty orange-brown, no O/S.

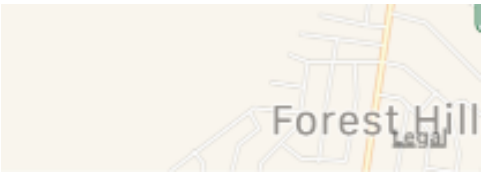
Appendix J

Surface water and sediment field forms

SURFACE WATER / SEDIMENT SAMPLING FORM

EMM
creating opportunities

Job No.:	J200300
Date & Time on site:	10 June 2020 at 4:57 pm
EMM Technician:	AT, YC
Sample ID:	SW/SD01

Site location:	Brunslea Park
Location:	
	-35.14854 147.45228

OBSERVATIONS

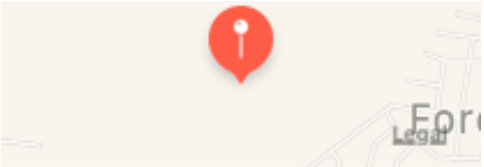
Description of location:	E541195, N6110392							
Temperature:	10.7	Deg C	pH:	6.67	Units	DO:	10.28	mg/L
Spec Conductivity:	384.6	us/cm	PID:		ppm	Redox:	219.4	mV
Description:	Drainage channel inline with Tantoon Circuit, low water level, no flow, no odour/sheen, low turbidity water.							

Additional Comments: & Photos:

Rootless present in sediment sample

SURFACE WATER / SEDIMENT SAMPLING FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	11 June 2020 at 10:43 am	Location:	
EMM Technician:	YC		
Sample ID:	SW/SD02		-35.14850 147.44702

OBSERVATIONS

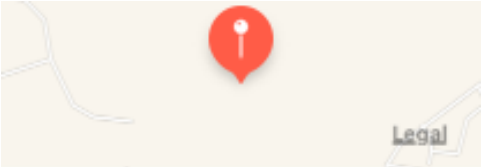
Description of location:	E0540717, N6110394							
Temperature:	7.0	Deg C	pH:	6.22	Units	DO:	10.32	mg/L
Spec Conductivity:	86.0	us/cm	PID:		ppm	Redox:	211.2	mV
Description:	Surface water pond, no flow, no sheen/odour, medium turbidity water.							

Additional Comments: & Photos:

Roots present in sediment sample

SURFACE WATER / SEDIMENT SAMPLING FORM

Job No.:	J200300
Date & Time on site:	11 June 2020 at 11:26 am
EMM Technician:	YC
Sample ID:	SW/SD03

Site location:	Brunslea Park
Location:	
	-35.14923 147.44347

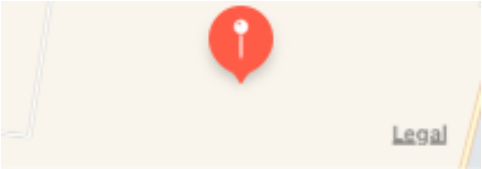
OBSERVATIONS

Description of location:	E540387, N6110312							
Temperature:	10.0	Deg C	pH:	7.04	Units	DO:	6.50	mg/L
Spec Conductivity:	367.2	us/cm	PID:		ppm	Redox:	216.7	mV
Description:	Dam, no flow. A lot of algae and organic matters floating on the surface of the water. No sheen/odour, high turbidity.							

Additional Comments: & Photos:

SURFACE WATER / SEDIMENT SAMPLING FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	11 June 2020 at 1:55 pm	Location:	
EMM Technician:	YC		
Sample ID:	SW/SD07		-35.15826 147.44594

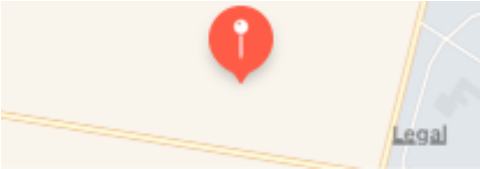
OBSERVATIONS

Description of location:	E540615, N6109317							
Temperature:	16.9	Deg C	pH:	9.51	Units	DO:	23.76	mg/L
Spec Conductivity:	177.4	us/cm	PID:		ppm	Redox:	139.0	mV
Description:	New SW/SD07 location. Small pond adjacent to fence line. No flow. No sheen. Organic odour, smell like cow manure.							

Additional Comments: & Photos:

Roots present in sediment sample

SURFACE WATER / SEDIMENT SAMPLING FORM

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	11 June 2020 at 1:17 pm	Location:	
EMM Technician:	YC		
Sample ID:	SW/SD08		-35.16072 147.44827

OBSERVATIONS

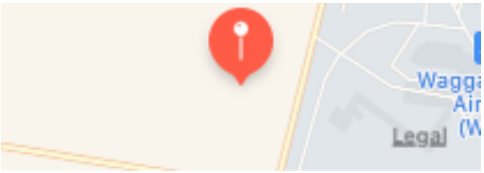
Description of location:	E540817, N6109044							
Temperature:	16.0	Deg C	pH:	7.44	Units	DO:	6.19	mg/L
Spec Conductivity:	371.8	us/cm	PID:		ppm	Redox:	196.8	mV
Description:	Dam, no flow. No odour/sheen. High turbidity water.							

Additional Comments: & Photos:

Roots present in sediment sample

SURFACE WATER / SEDIMENT SAMPLING FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	11 June 2020 at 3:31 pm	Location:	
EMM Technician:	YC		
Sample ID:	SW/SD11		-35.16034 147.45232

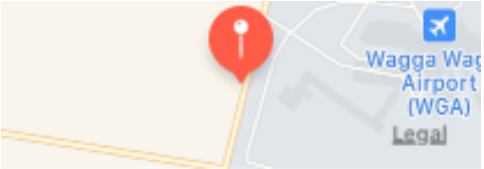
OBSERVATIONS

Description of location:	E541195, N6109086							
Temperature:	9.7	Deg C	pH:	6.88	Units	DO:	11.20	mg/L
Spec Conductivity:	104.8	us/cm	PID:		ppm	Redox:	194.0	mV
Description:	A little bit of surface water was found at this location, it seemed it was a man made hole in the ground within the natural drainage channel. Stagnant water with no sheen/odour. Low turbidity.							

Additional Comments: & Photos:

SURFACE WATER / SEDIMENT SAMPLING FORM

EMM
creating opportunities

Job No.:	J200300	Site location:	Brunslea Park
Date & Time on site:	11 June 2020 at 4:17 pm	Location:	
EMM Technician:	YC		
Sample ID:	SW/SD13		-35.16092 147.45427

OBSERVATIONS

Description of location:	E541376, N6109014							
Temperature:	13.3	Deg C	pH:	7.43	Units	DO:	10.54	mg/L
Spec Conductivity:	86.0	us/cm	PID:		ppm	Redox:	214.0	mV
Description:	Water dam next to fence line along Elizabeth Ave. No flow. No sheen/ odour. Medium turbidity water. Mossy on the water edge.							

Additional Comments: & Photos:

EMM
creating opportunities

SURFACE WATER SEDIMENT SAMPLING RECORD

Project Name:	Brunslea Park DSI	**Project Number:**	J200300	**PM Name:**	D Condon	**Sample Date:**	16/06 - 17/06
Client:	Yarraman Developments	**Project Location:**	Forest Hill, NSW	**Fieldwork Staff:**	L Lewis	**Page:**	1 of 1

GENERAL INFORMATION

Sample Method:	Grab samples	**Weather Conditions 16/6:**	Overcast, 11°C
Geo Ref. System:	UTM	**Weather Conditions 17/6:**	Heavy fog, 9°C
Comments:	SW/SD10 dry, only SD sample taken		

SAMPLING INFORMATION

Sample Location	Time	Date	Easting (m)	Northing (m)	Sample ID	Water Depth (m)	Sample depth (m bgl)	SW/SD description	pH	EC (uS/cm)	Redox (mV)	DO (mg/L)	Temp (°C)	PID (ppm)
SW/SD14	8:30	16/06/2020	540652	6108853	SD14 (+QC100)		0-0.1	Gravelly sandy SILT; 30% organics, brown, no O/S, wet	-	-	-	-	-	0.7
	8:45	16/06/2020			SW14	0.2		Very turbid, silty, brown, no O/S	6.77	112.4	154	1.43	9.1	0.4
SW/SD06	9:35	16/06/2020	540475	6109414	SD06	-	0-0.1	Clayey SILT; 20% organics, brown, no O/S, wet	-	-	-	-	-	0.3
	9:45	16/06/2020			SW06	0.08	-	-	6.62	425	162	2.5	9.9	0.2
SW/SD05	10:10	16/06/2020	540337	6109433	SD05		0-0.1	CLAY; <10% organics, brown, no O/S, wet	-	-	-	-	-	1
	10:20	16/06/2020			SW05	0.6	-	Turbid, brown, slight sulfur odour	7.66	322.8	144.7	6.34	10.5	0.4
SW/SD04	10:55	16/06/2020	540825	6109961	SD04	-	0-0.1	Silty CLAY; brown, no O/D, wet	-	-	-	-	-	0.2
	10:45	16/06/2020			SW04	0.3	-	Turbid, brown, no O/S	7.41	199	122.1	7.4	10.4	0.1
SW/SD12	8:55	17/06/2020	541313	6109053	SD12 (+QC201)	-	0-0.1	Silty CLAY; 30% organics, brown, no O/S, wet	-	-	-	-	-	0.9
	8:45	17/06/2020			SW12	0.05	-	Turbid, grey/brown, no O/S	7.45	118.5	102.6	8.7	10	0.1
SD10	9:20	17/06/2020	541122	6109101	SD10	-	0-0.1	gravelly SILT; well rounded, grey/brown, trace organics, no O/S, moist	-	-	-	-	-	0.6
SW/SD09	10:00	17/06/2020	540999	6109126	SD09	-	0-0.1	Clayey SILT; 20% organics, grey/brown, no O/S, wet	-	-	-	-	-	0.8
	9:45	17/06/2020			SW09	0.03	-	Turbid, grey/brown, no O/S	7.21	164.1	134.6	3.24	9.7	0.2

Appendix K

Laboratory documentation

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3/1 Burma Road Pooraka SA 5095 Ph: 08 8162 5136 E: adelaide@alsglobal.com
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☐GLADSTONE 46 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
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☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com
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☐WOLLONGONG 1/19-21 Raloh Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):

ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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:
DANIEL CONDON	NIKI CARS		
DATE/TIME: 15/6/20 10:00	DATE/TIME: 15/6/20 @ 13:15	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MW02B_13.65	11/6/20	S		2		X			X				
2	MW02A_0.05	12/6/20	S			X	X		X	X			X	
3	MW02A_1.0		S						X		X			
4	MW02A_2.0		S									X		
5	MW02A_3.0		S									X		
6	MW05_0.1		S			X	X		X	X			X	
7	MW05_0.5		S				X	X	X	X	X			
8	MW05_1.0		S									X		
9	MW05_2.8		S									X		
10	MW06_0.1		S				X		X	X	X			
11	MW06_0.5		S				X		X					
12	MW06_1.0		S							X				
				TOTAL	24	2	5	3	6	6	3	4	2	

Environmental Division Melbourne
Work Order Reference
EM2010131

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
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Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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☐WOLLONGONG 1/10-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439685614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, alennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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:
DANIEL CONDON	NIKI (ALS)		
DATE/TIME: 15/6/20 10:00	DATE/TIME: 15/6/20 @ 13:15	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

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13	MW06_3.0	12/6/2	S		2							X		
14	QA07						X	X	X	X	X			
→	QA08						X	X	X	X	X			FORWARD TO ENVIROLAB
15	QA09											X		
16	QA10											X		
17	MW01_0.05	13/6/20	S		2		X		X	X				
18	MW01_0.9						X		X					
19	MW01_2.0									X				
20	MW01_3.0						X							
21	MW04_0.1					X	X	X	X	X			X	
22	MW04_0.5						X		X	X				
23	MW04_1.0											X		
				TOTAL	24	1	5	3	6	6	2	4	1	

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OF: 1 2 3 4 5 6 7

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:
DATE/TIME:	DATE/TIME: Niki (ALS) 15/6/20 @ 13:15	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/~~TRH/BTEX/HVOC/PAH~~	Chlorinated hydrocarbons (EP074DEFG solids)	Hold		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
24	MW04_2.0	13/6/20	S		2							X		
25	RIN_200613	13/6/20	W		1					X				METALS ONLY
26	RIN_200614	14/6/20	W		1					X				"
	Extra sample: BN 17/6													
27	MW02A_13.9	12/6/20	S		2									
28	TRIPBLANK_05		S		1									
29	TRIPBLANK_06		S		1									
30	TRIPSPIKE_05 (TS556)		S		1									
31	TRIPSPIKE_06 (TS557)		S		1									
32	TRIPSPIKE CONTROL (TS556)		S		1									
33	TRIPSPIKE CONTROL (TS557)		S		1									
				TOTAL	4					2		1		

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DANIEL CONDON	NIKI (ALS)		
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2	MW02A_0.05	12/6/20	S			X	X		X	X			X	
3	MW02A_1.0		S						X		X			
4	MW02A_2.0		S									X		
5	MW02A_3.0		S									X		
6	MW05_0.1		S			X	X		X	X	~~X~~		X	
7	MW05_0.5		S				~~X~~ X	~~X~~ X	X	X	X			
8	MW05_1.0		S									X		
9	MW05_2.8		S									X		
10	MW06_0.1		S				X	~~X~~	X	X	X			
11	MW06_0.5		S				X		X					
12	MW06_1.0		S							X				
				TOTAL	24	2	5	3	6	6	3	4	2	

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

Environmental Division
Melbourne
Work Order Reference
EM2010131

Telephone : + 61-3-8549 9600

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3/1 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Gladstone QLD 4680 Ph: 07 4976 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):**

ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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:
DANIEL LONDON	NIKI (ALS)		
DATE/TIME: 15/6/20 10:00	DATE/TIME: 15/6/20 @ 13:15	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
13	MW06_3.0	12/6/2	S		2							X		
14	QA07						X	X	X	X	X			
→	QA08						X	X	X	X	X			FORWARD TO ENVIROLAB
15	QA09											X		
16	QA10											X		
17	MW01_0.05	13/6/20	S		2		X		X	X				
18	MW01_0.9						X		X					
19	MW01_2.0									X				
20	MW01_3.0						X							
21	MW04_0.1					X	X	X	X	X			X	
22	MW04_0.5						X		X	X				
23	MW04_1.0											X		
				TOTAL	24	1	5	3	6	6	2	4	1	

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 31 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 48 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 5735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: 20 Chandos St, St Leonards		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes No N/A
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300	**ALS QUOTE NO.:** ME/359/20	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:** Australia	COC: 1 2 (3) 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Daniel Condon	**CONTACT PH:** 0439885614	OF: 1 2 (3) 4 5 6 7	Other comment:
SAMPLER: Daniel Condon and Alex Tennant	**SAMPLER MOBILE:** 0439885614, 0430474184		
COC Emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**		
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net			
Email Invoice to: dcondon@emmconsulting.com.au			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	Niki (ALS) DATE/TIME: 15/6/20 @ 13:15	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/~~TRUREXTEXN/PAM (S-26)~~	Chlorinated hydrocarbons (EP074DEFG solids)	Hold		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
24	MW04_2.0	13/6/20	S		2							X		
25	RIN_200613	13/6/20	W		1					X				METALS ONLY
26	RIN_200614	14/6/20	W		1					X				"
	Extra sample: BN 17/6													
27	MW02A_13.9	12/6/20	S		2									
28	TRIPBLANK_05		S		1									
29	TRIPBLANK_06		S		1									
30	TRIPSPIKE_05 (TS556)		S		1									
31	TRIPSPIKE_06 (TS557)		S		1									
32	TRIPSPIKE CONTROL (TS556)		S		1									
33	TRIPSPIKE CONTROL (TS557)		S		1									
				TOTAL	4					2		1		

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2010131**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: 187 Coventry Street Melbourne 3205	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Melbourne@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: J200300	Page	: 1 of 4
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Brunslea Park DSI		
Sampler	: DC/AT		

Dates

Date Samples Received	: 15-Jun-2020 13:15	Issue Date	: 20-Jun-2020
Client Requested Due Date	: 22-Jun-2020	Scheduled Reporting Date	: **22-Jun-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 5.2°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 33 / 24

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, ALS Scoresby & ALS Sydney.**
- **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 Herbicides analysis, in addition to analysis for samples 027-033, will be complete on 25/06/2020.
- 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.

Method Client sample ID	Sample Container Received	Preferred Sample Container for Analysis
Asbestos Identification in Soils : EA200		
MW02A_0.05	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
MW05_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
MW04_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag

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

EM2010131-030 : [12-Jun-2020] : TRIP SPIKE_05 - TSS56
EM2010131-031 : [12-Jun-2020] : TRIP SPIKE_06 - TSS57
EM2010131-032 : [12-Jun-2020] : TRIP SPIKE CONTROL_05 - TSS56
EM2010131-033 : [12-Jun-2020] : TRIP SPIKE CONTROL_06 - TSS57

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 - EA200G Asbestos Identification in Soils -	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EM2010131-001	11-Jun-2020 00:00	MW02B_13.65	✓				✓		✓
EM2010131-002	12-Jun-2020 00:00	MW02A_0.05	✓	✓		✓	✓	✓	✓
EM2010131-003	12-Jun-2020 00:00	MW02A_1.0	✓		✓			✓	
EM2010131-006	12-Jun-2020 00:00	MW05_0.1	✓	✓		✓	✓	✓	✓
EM2010131-007	12-Jun-2020 00:00	MW05_0.5	✓		✓		✓	✓	✓
EM2010131-010	12-Jun-2020 00:00	MW06_0.1	✓		✓		✓	✓	✓
EM2010131-011	12-Jun-2020 00:00	MW06_0.5	✓				✓	✓	
EM2010131-012	12-Jun-2020 00:00	MW06_1.0	✓						✓
EM2010131-014	12-Jun-2020 00:00	QA07	✓		✓		✓	✓	✓
EM2010131-017	13-Jun-2020 00:00	MW01_0.05	✓				✓	✓	✓
EM2010131-018	13-Jun-2020 00:00	MW01_0.9	✓					✓	
EM2010131-019	13-Jun-2020 00:00	MW01_2.0	✓						✓
EM2010131-020	13-Jun-2020 00:00	MW01_3.0	✓				✓		
EM2010131-021	13-Jun-2020 00:00	MW04_0.1	✓	✓		✓	✓	✓	✓
EM2010131-022	13-Jun-2020 00:00	MW04_0.5	✓					✓	✓
EM2010131-027	12-Jun-2020 00:00	MW02A_13.9	✓				✓		
EM2010131-028	[12-Jun-2020]	TRIP BLANK_05	✓						
EM2010131-029	[12-Jun-2020]	TRIP BLANK_06	✓						
EM2010131-030	[12-Jun-2020]	TRIP SPIKE_05 TSS56	✓						
EM2010131-031	[12-Jun-2020]	TRIP SPIKE_06 TSS57	✓						
EM2010131-032	[12-Jun-2020]	TRIP SPIKE CONTROL_0...	✓						
EM2010131-033	12-Jun-2020 00:00	TRIP SPIKE CONTROL_0...	✓						

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - S-18 TRH(C6-C9)/BTEXN
EM2010131-004	12-Jun-2020 00:00	MW02A_2.0	✓		
EM2010131-005	12-Jun-2020 00:00	MW02A_3.0	✓		
EM2010131-007	12-Jun-2020 00:00	MW05_0.5		✓	
EM2010131-008	12-Jun-2020 00:00	MW05_1.0	✓		
EM2010131-009	12-Jun-2020 00:00	MW05_2.8	✓		
EM2010131-013	12-Jun-2020 00:00	MW06_3.0	✓		
EM2010131-014	12-Jun-2020 00:00	QA07		✓	
EM2010131-015	12-Jun-2020 00:00	QA09	✓		
EM2010131-016	12-Jun-2020 00:00	QA10	✓		
EM2010131-021	13-Jun-2020 00:00	MW04_0.1		✓	
EM2010131-023	13-Jun-2020 00:00	MW04_1.0	✓		
EM2010131-024	13-Jun-2020 00:00	MW04_2.0	✓		
EM2010131-028	[12-Jun-2020]	TRIP BLANK_05			✓
EM2010131-029	[12-Jun-2020]	TRIP BLANK_06			✓
EM2010131-030	[12-Jun-2020]	TRIP SPIKE_05 TSS56			✓
EM2010131-031	[12-Jun-2020]	TRIP SPIKE_06 TSS57			✓
EM2010131-032	[12-Jun-2020]	TRIP SPIKE CONTROL_0...			✓
EM2010131-033	12-Jun-2020 00:00	TRIP SPIKE CONTROL_0...			✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-02T 8 metals (Total)
EM2010131-025	13-Jun-2020 00:00	RIN_200613	✓
EM2010131-026	14-Jun-2020 00:00	RIN_200614	✓

Proactive Holding Time Report

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

Requested Deliverables

ALEX TENNANT

- *AU Certificate of Analysis - NATA (COA)	Email	atennant@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	atennant@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	atennant@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	atennant@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	atennant@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	atennant@emmconsulting.com.au

ALL ESDAT REPORTS

- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net

ALL INVOICES

- A4 - AU Tax Invoice (INV)	Email	finance@emmconsulting.com.au

DANIEL CONDON

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

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2010131**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: 187 Coventry Street Melbourne 3205	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Melbourne@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: J200300	Page	: 1 of 4
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Brunslea Park DSI		
Sampler	: DC/AT		

Dates

Date Samples Received	: 15-Jun-2020 13:15	Issue Date	: 17-Jun-2020
Client Requested Due Date	: 22-Jun-2020	Scheduled Reporting Date	: **22-Jun-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 3	Temperature	: 5.2°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 33 / 17

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please 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.**
- **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 Herbicides analysis will be complete on 25/06/2020.
- 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.

Method Client sample ID	Sample Container Received	Preferred Sample Container for Analysis
Asbestos Identification in Soils : EA200		
MW02A_0.05	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
MW05_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
MW04_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag

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

EM2010131-030 : [12-Jun-2020] : TRIP SPIKE_05 - TSS56
EM2010131-031 : [12-Jun-2020] : TRIP SPIKE_06 - TSS57
EM2010131-032 : [12-Jun-2020] : TRIP SPIKE CONTROL_05 - TSS56
EM2010131-033 : [12-Jun-2020] : TRIP SPIKE CONTROL_06 - TSS57

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 - EA200G Asbestos Identification in Soils -	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
EM2010131-001	11-Jun-2020 00:00	MW02B_13.65	✓				✓		✓
EM2010131-002	12-Jun-2020 00:00	MW02A_0.05	✓	✓		✓	✓	✓	✓
EM2010131-003	12-Jun-2020 00:00	MW02A_1.0	✓		✓			✓	
EM2010131-006	12-Jun-2020 00:00	MW05_0.1	✓	✓		✓	✓	✓	✓
EM2010131-007	12-Jun-2020 00:00	MW05_0.5	✓		✓		✓	✓	✓
EM2010131-010	12-Jun-2020 00:00	MW06_0.1	✓		✓		✓	✓	✓
EM2010131-011	12-Jun-2020 00:00	MW06_0.5	✓				✓	✓	
EM2010131-012	12-Jun-2020 00:00	MW06_1.0	✓						✓
EM2010131-014	12-Jun-2020 00:00	QA07	✓		✓		✓	✓	✓
EM2010131-017	13-Jun-2020 00:00	MW01_0.05	✓				✓	✓	✓
EM2010131-018	13-Jun-2020 00:00	MW01_0.9	✓					✓	
EM2010131-019	13-Jun-2020 00:00	MW01_2.0	✓						✓
EM2010131-020	13-Jun-2020 00:00	MW01_3.0	✓				✓		
EM2010131-021	13-Jun-2020 00:00	MW04_0.1	✓	✓		✓	✓	✓	✓
EM2010131-022	13-Jun-2020 00:00	MW04_0.5	✓					✓	✓

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS
EM2010131-004	12-Jun-2020 00:00	MW02A_2.0	✓	
EM2010131-005	12-Jun-2020 00:00	MW02A_3.0	✓	
EM2010131-007	12-Jun-2020 00:00	MW05_0.5		✓
EM2010131-008	12-Jun-2020 00:00	MW05_1.0	✓	
EM2010131-009	12-Jun-2020 00:00	MW05_2.8	✓	
EM2010131-013	12-Jun-2020 00:00	MW06_3.0	✓	
EM2010131-014	12-Jun-2020 00:00	QA07		✓
EM2010131-015	12-Jun-2020 00:00	QA09	✓	
EM2010131-016	12-Jun-2020 00:00	QA10	✓	
EM2010131-021	13-Jun-2020 00:00	MW04_0.1		✓
EM2010131-023	13-Jun-2020 00:00	MW04_1.0	✓	
EM2010131-024	13-Jun-2020 00:00	MW04_2.0	✓	
EM2010131-027	12-Jun-2020 00:00	MW02A_13.9	✓	
EM2010131-028	[12-Jun-2020]	TRIP BLANK_05	✓	
EM2010131-029	[12-Jun-2020]	TRIP BLANK_06	✓	
EM2010131-030	[12-Jun-2020]	TRIP SPIKE_05 TSS56	✓	
EM2010131-031	[12-Jun-2020]	TRIP SPIKE_06 TSS57	✓	
EM2010131-032	[12-Jun-2020]	TRIP SPIKE CONTROL_0...	✓	
EM2010131-033	12-Jun-2020 00:00	TRIP SPIKE CONTROL_0...	✓	

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - W-02T 8 metals (Total)
EM2010131-025	13-Jun-2020 00:00	RIN_200613	✓
EM2010131-026	14-Jun-2020 00:00	RIN_200614	✓

Proactive Holding Time Report

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

Requested Deliverables

ALEX TENNANT

- *AU Certificate of Analysis - NATA (COA)	Email	atennant@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	atennant@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	atennant@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	atennant@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	atennant@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	atennant@emmconsulting.com.au

ALL ESDAT REPORTS

- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net

ALL INVOICES

- A4 - AU Tax Invoice (INV)	Email	finance@emmconsulting.com.au

DANIEL CONDON

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

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2010131**	Page	: 1 of 12
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Telephone	: +61-3-8549 9600
Project	: J200300	Date Samples Received	: 15-Jun-2020
Site	: Brunslea Park DSI	Issue Date	: 25-Jun-2020
Sampler	: DC/AT	No. of samples received	: 33
Order number	: ----	No. of samples analysed	: 24

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

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-3085801-001	----	**Iodomethane**	74-88-4	42.0 %	47.0-125%	**Recovery less than lower control limit**
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EM2010477--002	Anonymous	**Perfluorodecane sulfonic acid (PFDS)**	335-77-3	32.0 %	59.0-134%	**Recovery less than lower data quality objective**
EP231D: (n:2) Fluorotelomer Sulfonic Acids	EM2010477--002	Anonymous	**10:2 Fluorotelomer sulfonic acid (10:2 FTS)**	120226-60-0	44.8 %	50.0-130%	**Recovery less than lower data quality objective**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG020T: Total Metals by ICP-MS	EM2010038--001	Anonymous	**Arsenic**	7440-38-2	12.7 %	82.0-118%	**Recovery less than lower data quality objective**
EG020T: Total Metals by ICP-MS	EM2010038--001	Anonymous	**Chromium**	7440-47-3	78.2 %	80.0-118%	**Recovery less than lower data quality objective**
EG020T: Total Metals by ICP-MS	EM2010038--001	Anonymous	**Nickel**	7440-02-0	120 %	80.0-118%	**Recovery greater than upper data quality objective**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP202S: Phenoxyacetic Acid Herbicide Surrogate	EM2010131-006	MW05_0.1	**2.4-Dichlorophenyl Acetic Acid**	19719-28-9	17.8 %	45.0-139 %	**Recovery less than lower data quality objective**
EP202S: Phenoxyacetic Acid Herbicide Surrogate	EM2010131-021	MW04_0.1	**2.4-Dichlorophenyl Acetic Acid**	19719-28-9	18.5 %	45.0-139 %	**Recovery less than lower data quality objective**
EP231S: PFAS Surrogate	EM2010131-020	MW01_3.0	**13C4-PFOS**	----	124 %	60.0-120 %	**Recovery greater than upper data quality objective**
EP231S: PFAS Surrogate	EM2010131-021	MW04_0.1	**13C4-PFOS**	----	123 %	60.0-120 %	**Recovery greater than upper 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	
Laboratory Duplicates (DUP)					
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	0	3	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 / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) MW01_3.0	13-Jun-2020	----	----	----	17-Jun-2020	27-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) MW02B_13.65	11-Jun-2020	----	----	----	18-Jun-2020	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) MW02A_0.05, MW02A_1.0, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, MW06_1.0, QA07	12-Jun-2020	----	----	----	18-Jun-2020	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) TRIP BLANK_05, TRIP BLANK_06, TRIP SPIKE_05 - TSS56, TRIP SPIKE_06 - TSS57, TRIP SPIKE CONTROL_05 - TSS56, TRIP SPIKE CONTROL_06 - TSS57	12-Jun-2020	----	----	----	20-Jun-2020	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) MW02A_13.9	12-Jun-2020	----	----	----	22-Jun-2020	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EA055) MW01_0.05, MW01_0.9, MW01_2.0, MW04_0.1, MW04_0.5	13-Jun-2020	----	----	----	18-Jun-2020	27-Jun-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Subsampled by ALS (EA200) MW02A_0.05, MW05_0.1	12-Jun-2020	----	----	----	19-Jun-2020	09-Dec-2020	✓
Snap Lock Bag - Subsampled by ALS (EA200) MW04_0.1	13-Jun-2020	----	----	----	19-Jun-2020	10-Dec-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) MW02B_13.65	11-Jun-2020	18-Jun-2020	08-Dec-2020	✓	19-Jun-2020	08-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_1.0, QA07	12-Jun-2020	18-Jun-2020	09-Dec-2020	✓	19-Jun-2020	09-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	13-Jun-2020	18-Jun-2020	10-Dec-2020	✓	19-Jun-2020	10-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) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	09-Jul-2020	✓	**19-Jun-2020**	09-Jul-2020	✓
Soil Glass Jar - Unpreserved (EG035T) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_1.0, QA07	**12-Jun-2020**	**18-Jun-2020**	10-Jul-2020	✓	**19-Jun-2020**	10-Jul-2020	✓
Soil Glass Jar - Unpreserved (EG035T) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	11-Jul-2020	✓	**19-Jun-2020**	11-Jul-2020	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) MW05_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP066) MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) MW02A_0.05, MW02A_1.0, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP068) MW01_0.05, MW01_0.9, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) MW02A_0.05, MW02A_1.0, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP068) MW01_0.05, MW01_0.9, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) MW02A_1.0, MW05_0.5, MW06_0.1, QA07	**12-Jun-2020**	**18-Jun-2020**	19-Jun-2020	✓	**18-Jun-2020**	19-Jun-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) MW02A_1.0, MW05_0.5, MW06_0.1, QA07	**12-Jun-2020**	**18-Jun-2020**	19-Jun-2020	✓	**18-Jun-2020**	19-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
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) MW02A_1.0, MW05_0.5, MW06_0.1, QA07	**12-Jun-2020**	**18-Jun-2020**	19-Jun-2020	✓	**18-Jun-2020**	19-Jun-2020	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) MW02A_1.0, MW05_0.5, MW06_0.1, QA07	**12-Jun-2020**	**18-Jun-2020**	19-Jun-2020	✓	**18-Jun-2020**	19-Jun-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_1.0, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_1.0, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02A_0.05, MW05_0.1, MW06_1.0	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**19-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) TRIP BLANK_05, TRIP BLANK_06, TRIP SPIKE_05 - TSS56, TRIP SPIKE_06 - TSS57, TRIP SPIKE CONTROL_05 - TSS56, TRIP SPIKE CONTROL_06 - TSS57	**12-Jun-2020**	**20-Jun-2020**	26-Jun-2020	✓	**20-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**19-Jun-2020**	27-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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_1.0, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02A_0.05, MW05_0.1, MW06_1.0	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**19-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) TRIP BLANK_05, TRIP BLANK_06, TRIP SPIKE_05 - TSS56, TRIP SPIKE_06 - TSS57, TRIP SPIKE CONTROL_05 - TSS56, TRIP SPIKE CONTROL_06 - TSS57	**12-Jun-2020**	**20-Jun-2020**	26-Jun-2020	✓	**20-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP071) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**19-Jun-2020**	27-Jun-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW05_0.5, MW06_0.1, QA07	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**18-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW02A_0.05, MW05_0.1, MW06_1.0	**12-Jun-2020**	**18-Jun-2020**	26-Jun-2020	✓	**19-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) TRIP BLANK_05, TRIP BLANK_06, TRIP SPIKE_05 - TSS56, TRIP SPIKE_06 - TSS57, TRIP SPIKE CONTROL_05 - TSS56, TRIP SPIKE CONTROL_06 - TSS57	**12-Jun-2020**	**20-Jun-2020**	26-Jun-2020	✓	**20-Jun-2020**	26-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080) MW01_0.05, MW01_2.0, MW04_0.1, MW04_0.5	**13-Jun-2020**	**18-Jun-2020**	27-Jun-2020	✓	**19-Jun-2020**	27-Jun-2020	✓
EP202A: Phenoxyacetic Acid Herbicides by LCMS							
Soil Glass Jar - Unpreserved (EP202) MW02A_0.05, MW05_0.1	**12-Jun-2020**	**22-Jun-2020**	26-Jun-2020	✓	**23-Jun-2020**	01-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP202) MW04_0.1	**13-Jun-2020**	**22-Jun-2020**	27-Jun-2020	✓	**23-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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	09-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_13.9	**12-Jun-2020**	**22-Jun-2020**	09-Dec-2020	✓	**22-Jun-2020**	01-Aug-2020	✓
HDPE Soil Jar (EP231X) MW01_0.05, MW01_3.0, MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	10-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	09-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_13.9	**12-Jun-2020**	**22-Jun-2020**	09-Dec-2020	✓	**22-Jun-2020**	01-Aug-2020	✓
HDPE Soil Jar (EP231X) MW01_0.05, MW01_3.0, MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	10-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	09-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_13.9	**12-Jun-2020**	**22-Jun-2020**	09-Dec-2020	✓	**22-Jun-2020**	01-Aug-2020	✓
HDPE Soil Jar (EP231X) MW01_0.05, MW01_3.0, MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	10-Dec-2020	✓	**18-Jun-2020**	28-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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	09-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_13.9	**12-Jun-2020**	**22-Jun-2020**	09-Dec-2020	✓	**22-Jun-2020**	01-Aug-2020	✓
HDPE Soil Jar (EP231X) MW01_0.05, MW01_3.0, MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	10-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) MW02B_13.65	**11-Jun-2020**	**18-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_0.05, MW05_0.1, MW05_0.5, MW06_0.1, MW06_0.5, QA07	**12-Jun-2020**	**18-Jun-2020**	09-Dec-2020	✓	**18-Jun-2020**	28-Jul-2020	✓
HDPE Soil Jar (EP231X) MW02A_13.9	**12-Jun-2020**	**22-Jun-2020**	09-Dec-2020	✓	**22-Jun-2020**	01-Aug-2020	✓
HDPE Soil Jar (EP231X) MW01_0.05, MW01_3.0, MW04_0.1	**13-Jun-2020**	**18-Jun-2020**	10-Dec-2020	✓	**18-Jun-2020**	28-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; Unspecified (EG020A-T) RIN_200613	**13-Jun-2020**	**17-Jun-2020**	10-Dec-2020	✓	**17-Jun-2020**	10-Dec-2020	✓
Clear Plastic Bottle - Nitric Acid; Unspecified (EG020A-T) RIN_200614	**14-Jun-2020**	**17-Jun-2020**	11-Dec-2020	✓	**17-Jun-2020**	11-Dec-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unspecified (EG035T) RIN_200613	**13-Jun-2020**	**----**	----	----	**17-Jun-2020**	11-Jul-2020	✓
Clear Plastic Bottle - Nitric Acid; Unspecified (EG035T) RIN_200614	**14-Jun-2020**	**----**	----	----	**17-Jun-2020**	12-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)							
Moisture Content	EA055	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	15	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	0	3	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	30	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	15	13.33	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	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	30	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	15	13.33	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	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	30	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	15	13.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	30	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	6	**16.67**	**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)							
Total Mercury by FIMS	EG035T	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (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
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)
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)
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.
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.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
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)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
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.
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.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.
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)

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2010131**	Page	: 1 of 24
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: 187 Coventry Street Melbourne 3205	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: J200300	Date Samples Received	: 15-Jun-2020
Order number	: ----	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 25-Jun-2020
Sampler	: DC/AT		
Site	: Brunslea Park DSI		
Quote number	: ME/359/20		
No. of samples received	: 33		
No. of samples analysed	: 24		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Arenie Vijayaratnam	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Chatura Perera	Teamleader Wet Chem	Scoresby General Chemistry, Scoresby, VIC
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Mathew Fordham	Senior Chemist - Organics	Scoresby Organics, Scoresby, VIC
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Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC
Yalin Wei	LCMS ANALYST	Scoresby Organics, Scoresby, 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: 3085916)									
EM2010096-010	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	61	54	10.7	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	57	62	9.05	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	11	15.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	14	30.9	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	19	17	13.1	No Limit
EM2010131-012	MW06_1.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	30	26	15.5	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	20	17	13.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	14	11.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	16	12	31.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	22	20	13.0	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3085150)									
EM2010030-001	Anonymous	EA055: Moisture Content	----	0.1	%	15.6	15.6	0.00	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3085995)									
EM2010094-014	Anonymous	EA055: Moisture Content	----	0.1	%	12.9	13.0	0.933	0% - 50%
EM2010131-019	MW01_2.0	EA055: Moisture Content	----	0.1	%	16.2	15.7	3.03	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3086002)									
EM2010074-001	Anonymous	EA055: Moisture Content	----	0.1	%	4.6	4.2	8.70	No Limit
EM2010123-002	Anonymous	EA055: Moisture Content	----	0.1	%	19.8	20.8	4.48	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3091785)									
EM2010033-004	Anonymous	EA055: Moisture Content	----	0.1	%	<1.0	<1.0	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					
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3094624)									
EM2010131-027	MW02A_13.9	EA055: Moisture Content	----	0.1	%	23.4	21.8	7.28	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3085917)									
EM2010096-010	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2010131-012	MW06_1.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3085859)									
EM2010131-007	MW05_0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3085858)									
EM2010131-022	MW04_0.5	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
EM2010131-007	MW05_0.5	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

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: 3085858) - continued									
EM2010131-007	MW05_0.5	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3085858)									
EM2010131-022	MW04_0.5	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
EM2010131-007	MW05_0.5	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

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: 3085858) - continued									
EM2010131-007	MW05_0.5	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
EP074D: Fumigants (QC Lot: 3085801)									
EM2010131-007	MW05_0.5	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: 3085801)									
EM2010131-007	MW05_0.5	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

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: 3085801) - continued									
EM2010131-007	MW05_0.5	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: 3085801)									
EM2010131-007	MW05_0.5	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: 3085801)									
EM2010131-007	MW05_0.5	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3085856)									
EM2010131-022	MW04_0.5	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
EM2010131-007	MW05_0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3085856) - continued									
EM2010131-007	MW05_0.5	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: 3084033)									
EM2010131-001	MW02B_13.65	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010137-007	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3085802)									
EM2010131-007	MW05_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3085857)									
EM2010131-022	MW04_0.5	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	60	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	60	<50	18.2	No Limit
EM2010131-007	MW05_0.5	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 Petroleum Hydrocarbons (QC Lot: 3091676)									
EM2010131-028	TRIP BLANK_05	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3084033)									
EM2010131-001	MW02B_13.65	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2010137-007	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: 3085802)									
EM2010131-007	MW05_0.5	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: 3085857)									
EM2010131-022	MW04_0.5	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

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: 3085857) - continued									
EM2010131-007	MW05_0.5	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3091676)									
EM2010131-028	TRIP BLANK_05	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3084033)									
EM2010131-001	MW02B_13.65	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
EM2010137-007	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: 3085802)									
EM2010131-007	MW05_0.5	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: 3091676)									
EM2010131-028	TRIP BLANK_05	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
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3083932)									
EM2010068-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0389	0.0379	2.58	0% - 20%

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 (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3083932) - continued									
EM2010068-001	Anonymous	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0376	0.0394	4.64	0% - 20%
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.191	0.188	1.51	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0156	0.0164	4.97	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	1.02	1.11	8.74	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0046	0.0046	0.00	No Limit
EM2010131-021	MW04_0.1	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3092898)									
EM2010131-027	MW02A_13.9	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3083932)									
EM2010068-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0904	0.0873	3.46	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.213	0.197	7.45	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0411	0.0393	4.44	0% - 20%
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0780	0.0777	0.382	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0136	0.0136	0.00	0% - 20%
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0610	0.0599	1.80	0% - 20%
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0194	0.0185	4.70	0% - 20%
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0050	0.0041	21.7	0% - 50%
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	0.0016	0.0016	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	0.082	0.079	3.46	0% - 20%
EM2010131-021	MW04_0.1	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3083932) - continued									
EM2010131-021	MW04_0.1	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3092898)									
EM2010131-027	MW02A_13.9	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3083932)									
EM2010068-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0071	0.0066	7.19	0% - 50%
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	0.0006	0.0007	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0012	<0.0012	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0012	<0.0012	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	0.0026	<0.0012	69.4	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0012	<0.0012	0.00	No Limit
EM2010131-021	MW04_0.1	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3092898)									
EM2010131-027	MW02A_13.9	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3083932)									
EM2010068-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	0.0138	0.0144	4.22	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	0.208	0.197	5.28	0% - 20%
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	0.0018	0.0021	15.4	No Limit
EM2010131-021	MW04_0.1	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3092898)									
EM2010131-027	MW02A_13.9	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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 (%)

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: 3084728)									
EM2010038-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0050	0.0044	11.6	0% - 20%
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.068	0.068	0.00	0% - 20%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.594	0.640	7.46	0% - 20%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.399	0.424	6.09	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.451	0.466	3.37	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	1.51	1.68	10.7	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	2.57	2.76	7.16	0% - 20%
EM2010158-001	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	0.001	0.001	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3082918)									
EM2010118-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	0.0002	0.0002	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: 3085916)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	93.2	78.5	107
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	102	76.2	108
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	96.2	77.7	110
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	98.1	78.1	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	103	78.4	106
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	104	79.9	109
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	105	79.1	110
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3085917)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	93.6	76.9	110
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3085859)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	86.3	63.2	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 3085858)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.0	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	102	74.2	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	65.1	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	71.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	105	71.1	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	107	64.8	128
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	105	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	106	72.0	124
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.9	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	69.9	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	70.8	55.5	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3085858)								

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: 3085858) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	69.5	132
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.5	63.0	129
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	48.5	10.0	136
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	58.3	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	69.0	121
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	68.0	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	93.8	59.6	124
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.5	63.8	128
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	108	71.1	124
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	67.4	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	89.1	57.9	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	108	66.2	123
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	59.8	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	105	64.1	123
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	51.8	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	64.8	122
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	71.6	63.2	124
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	69.5	65.9	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	43.2	43.1	131
EP074D: Fumigants (QCLot: 3085801)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	87.9	61.4	115
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	95.2	70.1	113
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	93.0	63.2	107
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	95.4	64.8	107
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	108	68.3	110
EP074E: Halogenated Aliphatic Compounds (QCLot: 3085801)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	35.0	26.0	137
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	63.1	49.4	140
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	58.9	46.0	138
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	59.6	39.1	127
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	72.7	59.2	128
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	71.2	60.1	123
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	79.9	61.7	119
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	# 42.0	47.0	125
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	86.8	63.6	115
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	89.6	68.0	116
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	91.8	71.0	118
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	89.1	62.4	115
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	90.6	60.3	117

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: 3085801) - continued								
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	83.5	57.7	112
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	96.6	73.0	116
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	90.4	65.5	117
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	100	69.8	111
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	106	75.6	115
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	105	74.5	116
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	91.5	62.6	116
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	90.2	63.2	105
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	101	57.5	112
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	87.4	57.8	109
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	106	72.3	127
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	113	72.8	119
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	81.0	59.0	100
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	93.8	60.8	104
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	86.8	54.1	132
EP074F: Halogenated Aromatic Compounds (QCLot: 3085801)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	98.6	72.8	112
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	96.3	67.1	110
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	90.7	64.4	108
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	91.8	62.2	107
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	87.6	64.6	113
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	93.9	66.1	119
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	93.1	72.4	110
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	78.8	52.3	120
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	82.7	65.0	119
EP074G: Trihalomethanes (QCLot: 3085801)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	93.0	71.8	116
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	90.5	67.2	111
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	91.4	65.4	105
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	88.1	60.5	104
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3085856)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	107	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	91.6	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	109	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	94.1	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	97.1	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	95.2	83.4	136

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: 3085856) - continued								
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	95.9	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	96.6	80.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	101	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	102	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	111	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	97.4	67.4	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	97.7	66.0	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	96.9	65.4	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	94.4	67.8	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3084033)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	116	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3085802)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	82.6	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3085857)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	110	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	102	77.9	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091676)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	89.8	61.2	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3084033)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	111	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3085802)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	82.9	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3085857)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	110	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	108	55.1	131
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3091676)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	86.8	59.5	125
EP080: BTEXN (QCLot: 3084033)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	98.0	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	116	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	114	66.3	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
EP080: BTEXN (QCLot: 3084033) - continued								
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	128	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	126	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	112	61.2	123
EP080: BTEXN (QCLot: 3085802)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	81.2	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	86.4	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	86.9	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	85.7	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	89.1	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	95.5	61.2	123
EP080: BTEXN (QCLot: 3091676)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	90.0	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	90.7	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	91.9	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	97.1	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	99.6	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	77.5	61.2	123
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3091868)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	93.1	54.4	128
EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	96.0	45.5	130
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	100	51.7	135
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	99.5	60.0	130
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	88.3	56.8	131
EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	102	50.0	141
EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	97.6	68.5	131
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	89.7	50.8	141
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	84.6	40.8	126
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	93.0	57.4	139
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	92.3	38.9	137
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	100	48.7	129
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	93.9	49.4	106
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	80.3	53.2	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3083932)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.8	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	73.0	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
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3083932) - continued								
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3092898)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.8	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.4	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3083932)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	90.3	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.2	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.3	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3092898)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.2	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.4	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.2	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.2	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.4	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.2	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3083932)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	119	50.0	130

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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3083932) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	98.6	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	50.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.4	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.0	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3092898)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	106	50.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	119	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	50.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	50.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3083932)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	79.6	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.8	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	94.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	98.4	50.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3092898)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	92.0	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	114	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	95.2	50.0	130
EP231P: PFAS Sums (QCLot: 3083932)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231P: PFAS Sums (QCLot: 3092898)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----

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
EP231P: PFAS Sums (QCLot: 3092898) - continued								
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

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: 3084728)								
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	98.1	86.4	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.4	86.9	110
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	102	86.9	109
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	103	88.3	110
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	103	87.9	111
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	104	86.7	114
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3082918)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	99.5	72.6	115

Matrix Spike (MS) Report

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

Sub-Matrix: **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: 3085916)							
EM2010096-011	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.0	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	111	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	103	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	105	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	108	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	101	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3085917)							
EM2010096-011	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	83.9	76.0	116
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3085859)							
EM2010131-014	QA07	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	85.7	44.0	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 3085858)							

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
EP068A: Organochlorine Pesticides (OC) (QCLot: 3085858) - continued							
EM2010131-003	MW02A_1.0	EP068: gamma-BHC	58-89-9	0.5 mg/kg	79.7	22.0	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	71.3	18.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	85.8	23.0	136
		EP068: Dieldrin	60-57-1	0.5 mg/kg	87.4	42.0	136
		EP068: Endrin	72-20-8	0.5 mg/kg	79.0	23.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	63.1	20.0	133
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3085858)							
EM2010131-003	MW02A_1.0	EP068: Diazinon	333-41-5	0.5 mg/kg	92.3	49.0	135
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	81.1	41.0	127
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	81.0	47.0	133
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	79.2	45.0	133
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	71.2	40.0	128
EP074E: Halogenated Aliphatic Compounds (QCLot: 3085801)							
EM2010131-010	MW06_0.1	EP074: 1.1-Dichloroethene	75-35-4	2 mg/kg	64.2	29.0	141
		EP074: Trichloroethene	79-01-6	2 mg/kg	75.0	50.0	126
EP074F: Halogenated Aromatic Compounds (QCLot: 3085801)							
EM2010131-010	MW06_0.1	EP074: Chlorobenzene	108-90-7	2 mg/kg	91.4	65.0	133
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3085856)							
EM2010131-002	MW02A_0.05	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	92.2	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	89.4	52.0	148
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3084033)							
EM2010131-002	MW02A_0.05	EP080: C6 - C9 Fraction	----	28 mg/kg	82.5	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3085802)							
EM2010131-010	MW06_0.1	EP080: C6 - C9 Fraction	----	28 mg/kg	65.6	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3085857)							
EM2010131-002	MW02A_0.05	EP071: C10 - C14 Fraction	----	900 mg/kg	103	53.0	123
		EP071: C15 - C28 Fraction	----	3030 mg/kg	102	70.0	124
		EP071: C29 - C36 Fraction	----	1520 mg/kg	101	64.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3091676)							
EM2010131-028	TRIP BLANK_05	EP080: C6 - C9 Fraction	----	28 mg/kg	73.6	42.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3084033)							
EM2010131-002	MW02A_0.05	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	77.4	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3085802)							
EM2010131-010	MW06_0.1	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	61.7	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3085857)							

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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3085857) - continued							
EM2010131-002	MW02A_0.05	EP071: >C10 - C16 Fraction	----	1160 mg/kg	105	65.0	123
		EP071: >C16 - C34 Fraction	----	4020 mg/kg	100	67.0	121
		EP071: >C34 - C40 Fraction	----	280 mg/kg	106	44.0	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3091676)							
EM2010131-028	TRIP BLANK_05	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	72.8	39.0	129
EP080: BTEXN (QCLot: 3084033)							
EM2010131-002	MW02A_0.05	EP080: Benzene	71-43-2	2 mg/kg	73.3	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	89.2	56.0	139
EP080: BTEXN (QCLot: 3085802)							
EM2010131-010	MW06_0.1	EP080: Benzene	71-43-2	2 mg/kg	77.4	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	80.6	56.0	139
EP080: BTEXN (QCLot: 3091676)							
EM2010131-028	TRIP BLANK_05	EP080: Benzene	71-43-2	2 mg/kg	90.2	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	90.1	56.0	139
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3083932)							
EM2010131-001	MW02B_13.65	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	95.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	90.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	90.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	96.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	90.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	101	59.0	134
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3092898)							
EM2010477-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	86.4	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	94.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	96.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	96.0	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	93.6	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	# 32.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3083932)							
EM2010131-001	MW02B_13.65	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	89.0	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	92.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	92.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	90.4	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	98.0	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	96.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	93.6	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	88.8	64.0	136

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3083932) - continued							
EM2010131-001	MW02B_13.65	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	98.8	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	89.2	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	94.6	69.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3092898)							
EM2010477-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	93.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	92.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	95.6	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	90.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	97.6	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	93.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	86.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	90.8	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	106	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	80.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	111	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3083932)							
EM2010131-001	MW02B_13.65	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	92.8	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	115	50.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	114	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	90.5	50.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	112	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	99.6	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	94.0	61.0	139
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3092898)							
EM2010477-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	99.6	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	119	50.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	84.3	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	50.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	91.7	50.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	119	63.0	144

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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3092898) - continued							
EM2010477-002	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	91.6	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3083932)							
EM2010131-001	MW02B_13.65	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	78.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	86.4	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	110	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	110	50.0	130
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3092898)							
EM2010477-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	88.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	83.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	90.8	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	# 44.8	50.0	130

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
EG020T: Total Metals by ICP-MS (QCLot: 3084728)							
EM2010038-001	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	# 12.7	82.0	118
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	110	75.0	129
		EG020A-T: Chromium	7440-47-3	1 mg/L	# 78.2	80.0	118
		EG020A-T: Copper	7440-50-8	1 mg/L	104	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	# 120	80.0	118
		EG020A-T: Zinc	7440-66-6	1 mg/L	111	74.0	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3082918)							
EM2010123-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	89.2	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2010131**	Page	: 1 of 30
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: 187 Coventry Street Melbourne 3205	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: J200300	Date Samples Received	: 15-Jun-2020 13:15
Order number	: ----	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 25-Jun-2020 14:54
Sampler	: DC/AT		
Site	: Brunslea Park DSI		
Quote number	: ME/359/20		
No. of samples received	: 33		
No. of samples analysed	: 24		

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*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Arenie Vijayaratnam	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Chatura Perera	Teamleader Wet Chem	Scoresby General Chemistry, Scoresby, VIC
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Mathew Fordham	Senior Chemist - Organics	Scoresby Organics, Scoresby, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC
Yalin Wei	LCMS ANALYST	Scoresby Organics, Scoresby, 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.

- EP231X: Poor matrix spike recovery due to matrix interference.
- EP080: Samples EM2010131_030- 033 TRIP SPIKE and TRIP SPIKE CONTROL contains volatile compounds spiked into the sample containers prior to dispatch from the laboratory.
- 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.
- **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.**
- EG020T : EM2010038 #1 Poor matrix spike recovery for total metal due to sample matrix. Confirmed by re-digestion and re-analysis.
- EP231: Poor surrogate recovery due to matrix interference.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	4.0	11.2	11.0	11.3	16.7
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	----	45.1	----	45.7	----
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	----	U.DALKIN	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	No	----
Organic Fibre	----	0.1	g/kg	----	Yes	----	Yes	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	6	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	11	16	----	39	66
Copper	7440-50-8	5	mg/kg	<5	7	----	8	13
Lead	7439-92-1	5	mg/kg	5	10	----	13	12
Nickel	7440-02-0	2	mg/kg	6	7	----	13	26
Zinc	7440-66-6	5	mg/kg	9	12	----	15	18
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	<0.1
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	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
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)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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**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	**50**
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	**50**	----	<50	**50**
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
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<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
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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
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	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	**0.0005**	----	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	**0.0010**	----	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	----	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	**0.0015**	----	<0.0002	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	**0.0015**	----	<0.0002	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	**0.0015**	----	<0.0002	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	**82.7**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	95.1	95.7	102	90.3
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	63.5	68.7	64.7	52.8
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	81.0	----	83.2
Toluene-D8	2037-26-5	0.5	%	----	----	92.8	----	92.6
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	93.5	----	86.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	102	102	----	92.1	87.0
2-Chlorophenol-D4	93951-73-6	0.5	%	106	104	----	97.7	94.2
2.4.6-Tribromophenol	118-79-6	0.5	%	69.9	66.8	----	69.1	67.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	107	125	----	116	116
Anthracene-d10	1719-06-8	0.5	%	118	112	----	115	114
4-Terphenyl-d14	1718-51-0	0.5	%	95.9	93.5	----	96.5	98.2
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	87.8	90.7	----	92.1	85.2
Toluene-D8	2037-26-5	0.2	%	80.3	88.2	----	87.9	85.7
4-Bromofluorobenzene	460-00-4	0.2	%	94.3	102	----	101	90.6
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	97.7	----	17.8	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	112	109	----	113	106
13C8-PFOA	----	0.0002	%	114	108	----	113	109

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	11.8	9.4	11.3	17.3	11.5
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	----	<5	6	<5
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	62	----	30	30	20
Copper	7440-50-8	5	mg/kg	8	----	16	14	8
Lead	7439-92-1	5	mg/kg	15	----	16	12	10
Nickel	7440-02-0	2	mg/kg	12	----	20	32	11
Zinc	7440-66-6	5	mg/kg	14	----	22	17	15
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	<0.1	<0.1
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	<0.05	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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	----
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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
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)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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	**50**	**50**	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	**50**	**50**	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
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
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0004**	<0.0002	----	<0.0002	**0.0010**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	----	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0004**	<0.0002	----	<0.0002	**0.0010**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0004**	<0.0002	----	<0.0002	**0.0010**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0004**	<0.0002	----	<0.0002	**0.0010**
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	88.3	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	99.7	98.2	----	98.3	102
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.4	55.6	----	54.8	60.4
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	81.7	----	----	72.4	----
Toluene-D8	2037-26-5	0.5	%	89.0	----	----	84.6	----
4-Bromofluorobenzene	460-00-4	0.5	%	89.6	----	----	83.4	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	99.8	----	100	99.1	88.5
2-Chlorophenol-D4	93951-73-6	0.5	%	102	----	100	100	92.3
2.4.6-Tribromophenol	118-79-6	0.5	%	66.4	----	61.6	67.5	63.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	109	----	110	112	110
Anthracene-d10	1719-06-8	0.5	%	112	----	114	111	114
4-Terphenyl-d14	1718-51-0	0.5	%	92.5	----	92.5	97.3	94.9
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.8	----	93.0	74.6	92.2
Toluene-D8	2037-26-5	0.2	%	82.4	----	89.4	78.8	87.0
4-Bromofluorobenzene	460-00-4	0.2	%	87.6	----	104	81.5	99.2
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	110	108	----	112	110
13C8-PFOA	----	0.0002	%	110	106	----	111	109

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	14.7	----	----
Moisture Content	----	1.0	%	12.5	16.2	----	12.8	19.4
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	----	----	----	45.0	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	U.DALKIN	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	----
Organic Fibre	----	0.1	g/kg	----	----	----	Yes	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	6	----	<5	5
Cadmium	7440-43-9	1	mg/kg	----	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	----	36	----	32	32
Copper	7440-50-8	5	mg/kg	----	19	----	9	21
Lead	7439-92-1	5	mg/kg	----	12	----	11	14
Nickel	7440-02-0	2	mg/kg	----	20	----	9	20
Zinc	7440-66-6	5	mg/kg	----	33	----	15	29
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	<0.1	<0.1
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	----	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
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**	**60**
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**	**60**
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
>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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				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
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
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	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	<0.0005	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	<0.0002	<0.0002	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	89.8	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	101	----	----	98.2	94.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.3	----	----	59.7	54.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	97.5	----	89.9	92.9
2-Chlorophenol-D4	93951-73-6	0.5	%	----	99.0	----	91.6	94.2
2.4.6-Tribromophenol	118-79-6	0.5	%	----	67.7	----	64.2	67.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	119	----	107	110
Anthracene-d10	1719-06-8	0.5	%	----	120	----	108	113
4-Terphenyl-d14	1718-51-0	0.5	%	----	97.4	----	90.5	92.7
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	89.6	----	81.2	91.8
Toluene-D8	2037-26-5	0.2	%	----	83.8	----	77.5	86.1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	----	102	----	87.0	100
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	----	18.5	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	124	123	----
13C8-PFOA	----	0.0002	%	----	----	107	116	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	23.4	----	----	----	----
Moisture Content	----	1.0	%	----	<1.0	<1.0	5.6	6.8
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	23	31
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	34	41
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	<10	19	23
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	9.0	11.1
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<0.5	1.2	1.4
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	<0.5	3.3	3.8
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	1.3	1.5
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	<0.2	14.8	18.0
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	<0.5	4.6	5.3
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	89.4	79.9	83.5	78.9
Toluene-D8	2037-26-5	0.2	%	----	87.7	80.3	86.3	82.0
4-Bromofluorobenzene	460-00-4	0.2	%	----	111	102	104	94.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	104	----	----	----	----
13C8-PFOA	----	0.0002	%	113	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP SPIKE CONTROL_05 TSS56	TRIP SPIKE CONTROL_06 TSS57	----	----	----
			Client sampling date / time	[12-Jun-2020]	12-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2010131-032	EM2010131-033	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.2	7.2	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	33	35	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	46	48	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	26	28	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	0.3	0.3	----	----	----
Toluene	108-88-3	0.5	mg/kg	12.0	12.4	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	1.6	1.6	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	4.3	4.2	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	1.6	1.6	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	19.8	20.1	----	----	----
^ Total Xylenes	----	0.5	mg/kg	5.9	5.8	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	76.8	78.2	----	----	----
Toluene-D8	2037-26-5	0.2	%	82.0	80.8	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	96.3	97.3	----	----	----

Analytical Results

Sub-Matrix: **WATER** (Matrix: **WATER**)			Client sample ID	**RIN_200613**	**RIN_200614**	**----**	**----**	**----**
			Client sampling date / time	13-Jun-2020 00:00	14-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	**EM2010131-025**	**EM2010131-026**	**--------**	**--------**	**--------**
				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	**----**	**----**	**----**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**----**	**----**	**----**
Lead	7439-92-1	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	**----**	**----**	**----**

Analytical Results

Descriptive Results

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	MW02A_0.05 - 12-Jun-2020 00:00	Tan clay like soil with organic matter.
EA200: Description	MW05_0.1 - 12-Jun-2020 00:00	Tan clay like soil with organic matter.
EA200: Description	MW04_0.1 - 13-Jun-2020 00:00	Brown clay like soil with organic matter.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
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
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
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2010131**	Page	: 1 of 29
Amendment	: **(Preliminary Report)**		
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: 187 Coventry Street Melbourne 3205	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: J200300	Date Samples Received	: 15-Jun-2020 13:15
Order number	: ----	Date Analysis Commenced	: 17-Jun-2020
C-O-C number	: ----	Issue Date	: 22-Jun-2020 19:25
Sampler	: DC/AT		
Site	: Brunslea Park DSI		
Quote number	: ME/359/20		
No. of samples received	: 33		
No. of samples analysed	: 24		

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*
Arenie Vijayaratnam	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Chatura Perera	Teamleader Wet Chem	Scoresby General Chemistry, Scoresby, VIC
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Uyen Dalkin	Approved Asbestos Identifier	Melbourne Asbestos, 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.

This report contains preliminary authorised results. The report may contain semi-quantitative results. Any result presented in this preliminary report may be subject to change in the final report.

- EP080: Samples EM2010131_030- 033 TRIP SPIKE and TRIP SPIKE CONTROL contains volatile compounds spiked into the sample containers prior to dispatch from the laboratory.
- 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.
- **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.**
- EG020T : EM2010038 #1 Poor matrix spike recovery for total metal due to sample matrix. Confirmed by re-digestion and re-analysis.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	4.0	11.2	11.0	11.3	16.7
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	----	45.1	----	45.7	----
APPROVED IDENTIFIER:	----	-	--	----	U.DALKIN	----	U.DALKIN	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	No	----
Organic Fibre	----	0.1	g/kg	----	Yes	----	Yes	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	6	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	11	16	----	39	66
Copper	7440-50-8	5	mg/kg	<5	7	----	8	13
Lead	7439-92-1	5	mg/kg	5	10	----	13	12
Nickel	7440-02-0	2	mg/kg	6	7	----	13	26
Zinc	7440-66-6	5	mg/kg	9	12	----	15	18
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	<0.1
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	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	<0.05	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
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)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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**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	**50**
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	**50**	----	<50	**50**
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
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	-	mg/kg	**Not Authorised**	**Not Authorised**	**----**	**Not Authorised**	**Not Authorised**
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	-	mg/kg	**Not Authorised**	**Not Authorised**	**----**	**Not Authorised**	**Not Authorised**
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	-	mg/kg	**Not Authorised**	**Not Authorised**	**----**	**Not Authorised**	**Not Authorised**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	-	mg/kg	**Not Authorised**	**Not Authorised**	**----**	**Not Authorised**	**Not Authorised**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorodecane sulfonic acid (PFDS)	335-77-3	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoropentanoic acid (PFPeA)	2706-90-3	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorohexanoic acid (PFHxA)	307-24-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoroheptanoic acid (PFHpA)	375-85-9	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorooctanoic acid (PFOA)	335-67-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorononanoic acid (PFNA)	375-95-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorodecanoic acid (PFDA)	335-76-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorododecanoic acid (PFDoDA)	307-55-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231P: PFAS Sums								
Sum of PFAS	----	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Sum of PFHxS and PFOS	355-46-4/1763-23-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Sum of PFAS (WA DER List)	----	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	82.7
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	95.1	95.7	102	90.3
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	63.5	68.7	64.7	52.8
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	81.0	----	83.2
Toluene-D8	2037-26-5	0.5	%	----	----	92.8	----	92.6
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	93.5	----	86.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	102	102	----	92.1	87.0
2-Chlorophenol-D4	93951-73-6	0.5	%	106	104	----	97.7	94.2
2.4.6-Tribromophenol	118-79-6	0.5	%	69.9	66.8	----	69.1	67.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	107	125	----	116	116
Anthracene-d10	1719-06-8	0.5	%	118	112	----	115	114

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02B_13.65	MW02A_0.05	MW02A_1.0	MW05_0.1	MW05_0.5
			Client sampling date / time	11-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-001	EM2010131-002	EM2010131-003	EM2010131-006	EM2010131-007
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.5	%	95.9	93.5	----	96.5	98.2
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	87.8	90.7	----	92.1	85.2
Toluene-D8	2037-26-5	0.2	%	80.3	88.2	----	87.9	85.7
4-Bromofluorobenzene	460-00-4	0.2	%	94.3	102	----	101	90.6
EP231S: PFAS Surrogate								
13C4-PFOS	----	-	%	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
13C8-PFOA	----	-	%	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	11.8	9.4	11.3	17.3	11.5
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	----	<5	6	<5
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	62	----	30	30	20
Copper	7440-50-8	5	mg/kg	8	----	16	14	8
Lead	7439-92-1	5	mg/kg	15	----	16	12	10
Nickel	7440-02-0	2	mg/kg	12	----	20	32	11
Zinc	7440-66-6	5	mg/kg	14	----	22	17	15
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	<0.1	<0.1
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	<0.05	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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	----
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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
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)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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	**50**	**50**	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	**50**	**50**	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
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
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorodecane sulfonic acid (PFDS)	335-77-3	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoropentanoic acid (PFPeA)	2706-90-3	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorohexanoic acid (PFHxA)	307-24-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroheptanoic acid (PFHpA)	375-85-9	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorooctanoic acid (PFOA)	335-67-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorononanoic acid (PFNA)	375-95-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorodecanoic acid (PFDA)	335-76-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorododecanoic acid (PFDoDA)	307-55-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW06_0.1	MW06_0.5	MW06_1.0	QA07	MW01_0.05
			Client sampling date / time	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	12-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-010	EM2010131-011	EM2010131-012	EM2010131-014	EM2010131-017
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP231P: PFAS Sums								
Sum of PFAS	----	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Sum of PFHxS and PFOS	355-46-4/1763-23-1	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
Sum of PFAS (WA DER List)	----	-	mg/kg	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	88.3	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	99.7	98.2	----	98.3	102
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.4	55.6	----	54.8	60.4
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	81.7	----	----	72.4	----
Toluene-D8	2037-26-5	0.5	%	89.0	----	----	84.6	----
4-Bromofluorobenzene	460-00-4	0.5	%	89.6	----	----	83.4	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	99.8	----	100	99.1	88.5
2-Chlorophenol-D4	93951-73-6	0.5	%	102	----	100	100	92.3
2.4.6-Tribromophenol	118-79-6	0.5	%	66.4	----	61.6	67.5	63.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	109	----	110	112	110
Anthracene-d10	1719-06-8	0.5	%	112	----	114	111	114
4-Terphenyl-d14	1718-51-0	0.5	%	92.5	----	92.5	97.3	94.9
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.8	----	93.0	74.6	92.2
Toluene-D8	2037-26-5	0.2	%	82.4	----	89.4	78.8	87.0
4-Bromofluorobenzene	460-00-4	0.2	%	87.6	----	104	81.5	99.2
EP231S: PFAS Surrogate								
13C4-PFOS	----	-	%	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised
13C8-PFOA	----	-	%	Not Authorised	Not Authorised	----	Not Authorised	Not Authorised

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	14.7	----	----
Moisture Content	----	1.0	%	12.5	16.2	----	12.8	19.4
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	----	----	----	45.0	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	U.DALKIN	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	----
Organic Fibre	----	0.1	g/kg	----	----	----	Yes	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	6	----	<5	5
Cadmium	7440-43-9	1	mg/kg	----	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	----	36	----	32	32
Copper	7440-50-8	5	mg/kg	----	19	----	9	21
Lead	7439-92-1	5	mg/kg	----	12	----	11	14
Nickel	7440-02-0	2	mg/kg	----	20	----	9	20
Zinc	7440-66-6	5	mg/kg	----	33	----	15	29
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	<0.1	<0.1
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	----	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
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**	**60**
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**	**60**
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
>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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				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
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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	-	mg/kg	----	----	Not Authorised	Not Authorised	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorohexanoic acid (PFHxA)	307-24-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorooctanoic acid (PFOA)	335-67-1	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorononanoic acid (PFNA)	375-95-1	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorodecanoic acid (PFDA)	335-76-2	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	-	mg/kg	----	----	Not Authorised	Not Authorised	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	-	mg/kg	----	----	Not Authorised	Not Authorised	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	-	mg/kg	----	----	Not Authorised	Not Authorised	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	-	mg/kg	----	----	Not Authorised	Not Authorised	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	-	mg/kg	----	----	Not Authorised	Not Authorised	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	-	mg/kg	----	----	Not Authorised	Not Authorised	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	-	mg/kg	----	----	Not Authorised	Not Authorised	----
EP231P: PFAS Sums								
Sum of PFAS	----	-	mg/kg	----	----	Not Authorised	Not Authorised	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	-	mg/kg	----	----	Not Authorised	Not Authorised	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW01_0.9	MW01_2.0	MW01_3.0	MW04_0.1	MW04_0.5
			Client sampling date / time	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00	13-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	EM2010131-018	EM2010131-019	EM2010131-020	EM2010131-021	EM2010131-022
				Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued								
Sum of PFAS (WA DER List)	----	-	mg/kg	----	----	Not Authorised	Not Authorised	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	89.8	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	101	----	----	98.2	94.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.3	----	----	59.7	54.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	97.5	----	89.9	92.9
2-Chlorophenol-D4	93951-73-6	0.5	%	----	99.0	----	91.6	94.2
2.4.6-Tribromophenol	118-79-6	0.5	%	----	67.7	----	64.2	67.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	119	----	107	110
Anthracene-d10	1719-06-8	0.5	%	----	120	----	108	113
4-Terphenyl-d14	1718-51-0	0.5	%	----	97.4	----	90.5	92.7
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	89.6	----	81.2	91.8
Toluene-D8	2037-26-5	0.2	%	----	83.8	----	77.5	86.1
4-Bromofluorobenzene	460-00-4	0.2	%	----	102	----	87.0	100
EP231S: PFAS Surrogate								
13C4-PFOS	----	-	%	----	----	Not Authorised	Not Authorised	----
13C8-PFOA	----	-	%	----	----	Not Authorised	Not Authorised	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	<1.0	<1.0	5.6	6.8
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	23	31
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	34	41
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	<10	19	23
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	9.0	11.1
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<0.5	1.2	1.4
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	<0.5	3.3	3.8
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	1.3	1.5
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	<0.2	14.8	18.0
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	<0.5	4.6	5.3
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	-	mg/kg	Not Authorised	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	-	mg/kg	Not Authorised	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	-	mg/kg	Not Authorised	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	-	mg/kg	Not Authorised	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	-	mg/kg	Not Authorised	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	-	mg/kg	Not Authorised	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	-	mg/kg	Not Authorised	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	-	mg/kg	Not Authorised	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	-	mg/kg	Not Authorised	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	-	mg/kg	Not Authorised	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorooctanoic acid (PFOA)	335-67-1	-	mg/kg	Not Authorised	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	-	mg/kg	Not Authorised	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	-	mg/kg	Not Authorised	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	-	mg/kg	Not Authorised	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	-	mg/kg	Not Authorised	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	-	mg/kg	Not Authorised	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	-	mg/kg	Not Authorised	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	-	mg/kg	Not Authorised	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	-	mg/kg	Not Authorised	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	-	mg/kg	Not Authorised	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	-	mg/kg	Not Authorised	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	-	mg/kg	Not Authorised	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	-	mg/kg	Not Authorised	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	-	mg/kg	Not Authorised	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	-	mg/kg	Not Authorised	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	-	mg/kg	Not Authorised	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	-	mg/kg	Not Authorised	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW02A_13.9	TRIP BLANK_05	TRIP BLANK_06	TRIP SPIKE_05 TSS56	TRIP SPIKE_06 TSS57
			Client sampling date / time	12-Jun-2020 00:00	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]	[12-Jun-2020]
Compound	CAS Number	LOR	Unit	EM2010131-027	EM2010131-028	EM2010131-029	EM2010131-030	EM2010131-031
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	-	mg/kg	Not Authorised	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	-	mg/kg	Not Authorised	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	-	mg/kg	Not Authorised	----	----	----	----
Sum of PFAS (WA DER List)	----	-	mg/kg	Not Authorised	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	89.4	79.9	83.5	78.9
Toluene-D8	2037-26-5	0.2	%	----	87.7	80.3	86.3	82.0
4-Bromofluorobenzene	460-00-4	0.2	%	----	111	102	104	94.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	-	%	Not Authorised	----	----	----	----
13C8-PFOA	----	-	%	Not Authorised	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP SPIKE CONTROL_05 TSS56	TRIP SPIKE CONTROL_06 TSS57	----	----	----
			Client sampling date / time	[12-Jun-2020]	12-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2010131-032	EM2010131-033	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.2	7.2	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	33	35	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	46	48	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	26	28	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	0.3	0.3	----	----	----
Toluene	108-88-3	0.5	mg/kg	12.0	12.4	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	1.6	1.6	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	4.3	4.2	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	1.6	1.6	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	19.8	20.1	----	----	----
^ Total Xylenes	----	0.5	mg/kg	5.9	5.8	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	76.8	78.2	----	----	----
Toluene-D8	2037-26-5	0.2	%	82.0	80.8	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	96.3	97.3	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200613	RIN_200614	----	----	----
			Client sampling date / time	13-Jun-2020 00:00	14-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM2010131-025	EM2010131-026	--------	--------	--------
				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	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	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	----	----	----

Analytical Results

Descriptive Results

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	MW02A_0.05 - 12-Jun-2020 00:00	Tan clay like soil with organic matter.
EA200: Description	MW05_0.1 - 12-Jun-2020 00:00	Tan clay like soil with organic matter.
EA200: Description	MW04_0.1 - 13-Jun-2020 00:00	Brown clay like soil with organic matter.

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
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
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
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):
ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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: 6-5

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK LHEONG	[illegible]		
DATE/TIME: 11/6/20 9:00	DATE/TIME: 12/6/20 11:10am	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERB TRH (C6-C9)	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	BH01_0.1	10/6/20	S		2	X	X	X	X	X	X		X	
2	BH01_0.5											X		
3	BH01_1.0									X				
4	BH01_2.0								X					
5	BH01_2.7											X		
6	BH02_0.1									X				
7	BH02_0.5						X		X					
8	BH02_1.0								X					
9	BH02_2.0											X		
10	BH02_2.8									X				
11	QA01						X	X	X	X	X			
X	QA02						X	X	X	X	X			FORWARD TO ENVIROLAB
					TOTAL	1	4	3	6	6	3	3	1	

~~Subcontract Forward~~
~~Lab / Analysis:~~
~~Organised By / Date~~
~~Relinquished By~~
~~Connote / Courier~~
~~WO No:~~
~~Attached By 20~~

Split WO
ENV Rolab
QA01, QA04

ES2020331

Environmental Division Sydney
Work Order Reference
ES2020331

Telephone : +61-2-8784 8555

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):

ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 (2) 3 4 5 6 7
OF: 1 2 3 4 (5) 6 7

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: GS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK CHEONG	TASI		
DATE/TIME: 11/6/20 9.00	DATE/TIME: 12/6/20 11:[illegible]	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
12	BH03_0.1	10/6/20	S		2	X			X	X			X	
13	BH03_0.5									X				
14	BH03_1.0						X		X					
15	BH03_2.0											X		
16	BH03_2.8											X		
17	BH04_0.1					X			X				X	
18	BH04_0.5						X	X	X	X	X			
19	BH04_1.0											X		
20	BH04_2.0									X				
21	BH04_2.8											X		
22	QA03						X	X	X	X	X			
23	QA04						X	X	X	X	X			FORWARD TO ENVIROLAB
				TOTAL	24	2	4	3	6	6	3	4	2	

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3 1 Burma Road Pooraka SA 5095 Ph: 08 8152 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 48 Callemondah Drive Gladstone QLD 4680 Ph: 07 4975 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/23 Calemplar Drive Paget QLD 4740 Ph: 07 4952 5793 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Balch Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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☑ Standard TAT (List due date):
☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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: G-S

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK CHEONG	FAB:		
DATE/TIME: 11/6/20 9:00	DATE/TIME: 12/6/20 11:00	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).								Additional Information
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23	BH05_0.1	10/6/20	S		2	X	X		X					
24	BH05_0.5							X						
25	BH05_1.0								X	X				
26	BH05_2.0									X				
27	BH05_2.7										X			
28	BH06_0.1									X			X	
29	BH06_0.5						X		X		X			
30	BH06_1.0								X					
31	BH06_2.0									X				
32	BH06_2.6											X		
33	MW03A_0.1	9/6/20					X			X				
34	MW03A_0.5	"								X				
				TOTAL	24	1	3	1	4	6	2	1	1	

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐MACKAY Unit 2/22 Caterpillar Drive Paget Qld 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/79 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5-585 Maitland Road Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
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☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
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☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
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COC SEQUENCE NUMBER (Circle)
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OF: 1 2 3 4 5 6 7

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: 6-5

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK CHEONG	[illegible]		
DATE/TIME: 11/6/20 9:00	DATE/TIME: 12/6/20 11:10am	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).								Additional Information
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35	MW03A_1.0	9/6/20	S		2				X					
36	MW03A_2.0	"	↓		2			X						
37	MW03A_2.7	"	↓		2							X		
38	RIN_200610	10/6/20	W		1					X				JUST METALS ANALYSIS
39	TRIP BLANK_01		S		1								X	
40	TRIP BLANK_02		↓		1								X	
41	TRIP SPIKE_01				1									
42	TRIP SPIKE_02		↓		1									
43	TSC 1													
44	TSC 2													
				TOTAL	11			1	1	1		1	2	

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COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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: 6-5

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK CHEONG	FADS		
DATE/TIME: 11/6/20 9:00	DATE/TIME: 12/6/20 11:10am	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).								Additional Information
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45	MW03B_0.05	9/6/20	S		2							X		
46	MW03B_1.0	9/6/20	S		2							X		
47	MW03B_2.0	9/6/20	S		2							X		
48	MW03B_3.0	9/6/20	S		2							X		
49	MW02B_0.05	10/6/20	S		2							X		
50	MW02B_1.0	10/6/20	S		2							X		
51	MW02B_2.0	10/6/20	S		2							X		
52	MW02B_3.0	10/6/20	S		2							X		
				TOTAL	40							8		

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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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2020331**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: J200300 Brunslea Park DSI	Page	: 1 of 4
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: ALEX TENNANT, DANIEL CONDON		

Dates

Date Samples Received	: 12-Jun-2020 11:10	Issue Date	: 15-Jun-2020
Client Requested Due Date	: 19-Jun-2020	Scheduled Reporting Date	: **19-Jun-2020**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Intact.
No. of coolers/boxes	: 4	Temperature	: 6.5'C
Receipt Detail	: ESKIES	No. of samples received / analysed	: 52 / 33

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- This is an updated SRN which indicates the addition of asbestos analysis.
- **Samples QA02 and QA04 have been forwarded to Envirolab as per COC request.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **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 and NATA accreditation does not apply to analysis on these samples.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

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		
BH01_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH03_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH04_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH05_0.1	- 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	SOIL - EA055-103 Moisture Content	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2020331-001	10-Jun-2020 00:00	BH01_0.1	✓	✓	✓	✓	✓	✓	✓
ES2020331-003	10-Jun-2020 00:00	BH01_1.0	✓						✓
ES2020331-004	10-Jun-2020 00:00	BH01_2.0	✓					✓	
ES2020331-006	10-Jun-2020 00:00	BH02_0.1	✓						✓
ES2020331-007	10-Jun-2020 00:00	BH02_0.5	✓				✓	✓	
ES2020331-008	10-Jun-2020 00:00	BH02_1.0	✓					✓	
ES2020331-010	10-Jun-2020 00:00	BH02_2.8	✓						✓
ES2020331-011	10-Jun-2020 00:00	QA01	✓	✓	✓		✓	✓	✓
ES2020331-012	10-Jun-2020 00:00	BH03_0.1	✓			✓		✓	✓
ES2020331-013	10-Jun-2020 00:00	BH03_0.5	✓						✓
ES2020331-014	10-Jun-2020 00:00	BH03_1.0	✓				✓	✓	
ES2020331-017	10-Jun-2020 00:00	BH04_0.1	✓			✓		✓	
ES2020331-018	10-Jun-2020 00:00	BH04_0.5	✓	✓	✓		✓	✓	✓
ES2020331-020	10-Jun-2020 00:00	BH04_2.0	✓						✓
ES2020331-022	10-Jun-2020 00:00	QA03	✓	✓	✓		✓	✓	✓
ES2020331-023	10-Jun-2020 00:00	BH05_0.1	✓				✓	✓	
ES2020331-024	10-Jun-2020 00:00	BH05_0.5	✓	✓					
ES2020331-025	10-Jun-2020 00:00	BH05_1.0	✓					✓	✓
ES2020331-026	10-Jun-2020 00:00	BH05_2.0	✓						✓
ES2020331-027	10-Jun-2020 00:00	BH05_2.7	✓		✓				
ES2020331-028	10-Jun-2020 00:00	BH06_0.1	✓			✓			✓
ES2020331-029	10-Jun-2020 00:00	BH06_0.5	✓		✓		✓	✓	
ES2020331-030	10-Jun-2020 00:00	BH06_1.0	✓					✓	
ES2020331-031	10-Jun-2020 00:00	BH06_2.0	✓						✓
ES2020331-033	09-Jun-2020 00:00	MW03A_0.1	✓				✓		✓
ES2020331-034	09-Jun-2020 00:00	MW03A_0.5	✓						✓
ES2020331-035	09-Jun-2020 00:00	MW03A_1.0	✓					✓	
ES2020331-036	09-Jun-2020 00:00	MW03A_2.0	✓	✓					

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EA200G Asbestos Identification in Soils -	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2020331-001	10-Jun-2020 00:00	BH01_0.1		✓	
ES2020331-002	10-Jun-2020 00:00	BH01_0.5	✓		
ES2020331-005	10-Jun-2020 00:00	BH01_2.7	✓		
ES2020331-009	10-Jun-2020 00:00	BH02_2.0	✓		
ES2020331-012	10-Jun-2020 00:00	BH03_0.1		✓	
ES2020331-015	10-Jun-2020 00:00	BH03_2.0	✓		
ES2020331-016	10-Jun-2020 00:00	BH03_2.8	✓		
ES2020331-017	10-Jun-2020 00:00	BH04_0.1		✓	
ES2020331-019	10-Jun-2020 00:00	BH04_1.0	✓		
ES2020331-021	10-Jun-2020 00:00	BH04_2.8	✓		
ES2020331-023	10-Jun-2020 00:00	BH05_0.1		✓	
ES2020331-032	10-Jun-2020 00:00	BH06_2.6	✓		
ES2020331-037	09-Jun-2020 00:00	MW03A_2.7	✓		
ES2020331-039	10-Jun-2020 00:00	TRIP BLANK_01			✓
ES2020331-040	10-Jun-2020 00:00	TRIP BLANK_02			✓
ES2020331-041	10-Jun-2020 00:00	TRIP SPIKE_01	✓		
ES2020331-042	10-Jun-2020 00:00	TRIP SPIKE_02	✓		
ES2020331-043	10-Jun-2020 00:00	TSC 1			✓
ES2020331-044	10-Jun-2020 00:00	TSC 2			✓
ES2020331-045	09-Jun-2020 00:00	MW03B_0-05	✓		
ES2020331-046	09-Jun-2020 00:00	MW03B_1-0	✓		
ES2020331-047	09-Jun-2020 00:00	MW03B_2-0	✓		
ES2020331-048	09-Jun-2020 00:00	MW03B_3-0	✓		
ES2020331-049	10-Jun-2020 00:00	MW02B_0-05	✓		
ES2020331-050	10-Jun-2020 00:00	MW02B_1-0	✓		
ES2020331-051	10-Jun-2020 00:00	MW02B_2-0	✓		
ES2020331-052	10-Jun-2020 00:00	MW02B_3-0	✓		

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-02T 8 metals (Total)
ES2020331-038	10-Jun-2020 00:00	RIN_200610	✓

Proactive Holding Time Report

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

Requested Deliverables

ALEX TENNANT

- *AU Certificate of Analysis - NATA (COA)	Email	atennant@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	atennant@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	atennant@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	atennant@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	atennant@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	atennant@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	atennant@emmconsulting.com.au

ALL INVOICES

- A4 - AU Tax Invoice (INV)	Email	finance@emmconsulting.com.au

DANIEL CONDON

- *AU Certificate of Analysis - NATA (COA)	Email	dcondon@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	dcondon@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	dcondon@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	dcondon@emmconsulting.com.au
- A4 - AU Tax Invoice (INV)	Email	dcondon@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	dcondon@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	dcondon@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	dcondon@emmconsulting.com.au

EMM CONSULTING

- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2020331**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: J200300 Brunslea Park DSI	Page	: 1 of 4
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: ALEX TENNANT, DANIEL CONDON		

Dates

Date Samples Received	: 12-Jun-2020 11:10	Issue Date	: 19-Jun-2020
Client Requested Due Date	: 19-Jun-2020	Scheduled Reporting Date	: **19-Jun-2020**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Intact.
No. of coolers/boxes	: 4	Temperature	: 6.5'C
Receipt Detail	: ESKIES	No. of samples received / analysed	: 52 / 35

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- This is an updated SRN which indicates the addition of asbestos analysis.
- **Samples QA02 and QA04 have been forwarded to Envirolab as per COC request.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **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 and NATA accreditation does not apply to analysis on these samples.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

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		
BH01_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH03_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH04_0.1	- Snap Lock Bag - Subsampled by ALS	- Snap Lock Bag - ACM/Asbestos Grab Bag
BH05_0.1	- 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	SOIL - EA055-103 Moisture Content	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2020331-001	10-Jun-2020 00:00	BH01_0.1	✓	✓	✓	✓	✓	✓	✓
ES2020331-003	10-Jun-2020 00:00	BH01_1.0	✓						✓
ES2020331-004	10-Jun-2020 00:00	BH01_2.0	✓					✓	
ES2020331-006	10-Jun-2020 00:00	BH02_0.1	✓						✓
ES2020331-007	10-Jun-2020 00:00	BH02_0.5	✓				✓	✓	
ES2020331-008	10-Jun-2020 00:00	BH02_1.0	✓					✓	
ES2020331-010	10-Jun-2020 00:00	BH02_2.8	✓						✓
ES2020331-011	10-Jun-2020 00:00	QA01	✓	✓	✓		✓	✓	✓
ES2020331-012	10-Jun-2020 00:00	BH03_0.1	✓			✓		✓	✓
ES2020331-013	10-Jun-2020 00:00	BH03_0.5	✓						✓
ES2020331-014	10-Jun-2020 00:00	BH03_1.0	✓				✓	✓	
ES2020331-017	10-Jun-2020 00:00	BH04_0.1	✓			✓		✓	
ES2020331-018	10-Jun-2020 00:00	BH04_0.5	✓	✓	✓		✓	✓	✓
ES2020331-020	10-Jun-2020 00:00	BH04_2.0	✓						✓
ES2020331-022	10-Jun-2020 00:00	QA03	✓	✓	✓		✓	✓	✓
ES2020331-023	10-Jun-2020 00:00	BH05_0.1	✓				✓	✓	
ES2020331-024	10-Jun-2020 00:00	BH05_0.5	✓	✓					
ES2020331-025	10-Jun-2020 00:00	BH05_1.0	✓					✓	✓
ES2020331-026	10-Jun-2020 00:00	BH05_2.0	✓						✓
ES2020331-027	10-Jun-2020 00:00	BH05_2.7	✓		✓				
ES2020331-028	10-Jun-2020 00:00	BH06_0.1	✓			✓			✓
ES2020331-029	10-Jun-2020 00:00	BH06_0.5	✓		✓		✓	✓	
ES2020331-030	10-Jun-2020 00:00	BH06_1.0	✓					✓	
ES2020331-031	10-Jun-2020 00:00	BH06_2.0	✓						✓
ES2020331-033	09-Jun-2020 00:00	MW03A_0.1	✓				✓		✓
ES2020331-034	09-Jun-2020 00:00	MW03A_0.5	✓						✓
ES2020331-035	09-Jun-2020 00:00	MW03A_1.0	✓					✓	
ES2020331-036	09-Jun-2020 00:00	MW03A_2.0	✓	✓					

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EA200G Asbestos Identification in Soils -	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2020331-001	10-Jun-2020 00:00	BH01_0.1		✓	
ES2020331-002	10-Jun-2020 00:00	BH01_0.5	✓		
ES2020331-005	10-Jun-2020 00:00	BH01_2.7	✓		
ES2020331-009	10-Jun-2020 00:00	BH02_2.0	✓		
ES2020331-012	10-Jun-2020 00:00	BH03_0.1		✓	
ES2020331-015	10-Jun-2020 00:00	BH03_2.0	✓		
ES2020331-016	10-Jun-2020 00:00	BH03_2.8	✓		
ES2020331-017	10-Jun-2020 00:00	BH04_0.1		✓	
ES2020331-019	10-Jun-2020 00:00	BH04_1.0	✓		
ES2020331-021	10-Jun-2020 00:00	BH04_2.8	✓		
ES2020331-023	10-Jun-2020 00:00	BH05_0.1		✓	
ES2020331-032	10-Jun-2020 00:00	BH06_2.6	✓		
ES2020331-037	09-Jun-2020 00:00	MW03A_2.7	✓		
ES2020331-039	10-Jun-2020 00:00	TRIP BLANK_01			✓
ES2020331-040	10-Jun-2020 00:00	TRIP BLANK_02			✓
ES2020331-041	10-Jun-2020 00:00	TRIP SPIKE_01			✓
ES2020331-042	10-Jun-2020 00:00	TRIP SPIKE_02			✓
ES2020331-043	10-Jun-2020 00:00	TSC 1			✓
ES2020331-044	10-Jun-2020 00:00	TSC 2			✓
ES2020331-045	09-Jun-2020 00:00	MW03B_0-05	✓		
ES2020331-046	09-Jun-2020 00:00	MW03B_1-0	✓		
ES2020331-047	09-Jun-2020 00:00	MW03B_2-0	✓		
ES2020331-048	09-Jun-2020 00:00	MW03B_3-0	✓		
ES2020331-049	10-Jun-2020 00:00	MW02B_0-05	✓		
ES2020331-050	10-Jun-2020 00:00	MW02B_1-0	✓		
ES2020331-051	10-Jun-2020 00:00	MW02B_2-0	✓		
ES2020331-052	10-Jun-2020 00:00	MW02B_3-0	✓		

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-02T 8 metals (Total)
ES2020331-038	10-Jun-2020 00:00	RIN_200610	✓

Proactive Holding Time Report

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

Requested Deliverables

ALEX TENNANT

- *AU Certificate of Analysis - NATA (COA)	Email	atennant@emmconsulting.com.au
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- EDI Format - ESDAT (ESDAT)	Email	atennant@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	atennant@emmconsulting.com.au

ALL INVOICES

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DANIEL CONDON

- *AU Certificate of Analysis - NATA (COA)	Email	dcondon@emmconsulting.com.au
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- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	dcondon@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	dcondon@emmconsulting.com.au
- A4 - AU Tax Invoice (INV)	Email	dcondon@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	dcondon@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	dcondon@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	dcondon@emmconsulting.com.au

EMM CONSULTING

- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net

CERTIFICATE OF ANALYSIS

Work Order	: **ES2020331**	Page	: 1 of 49
Amendment	: **(Preliminary Report)**		
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 12-Jun-2020 11:10
Order number	: ----	Date Analysis Commenced	: 15-Jun-2020
C-O-C number	: ----	Issue Date	: 19-Jun-2020 16:20
Sampler	: ALEX TENNANT, DANIEL CONDON		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 52		
No. of samples analysed	: 35		

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*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS 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 report contains preliminary authorised results. The report may contain semi-quantitative results. Any result presented in this preliminary report may be subject to change in the final report.

- EP202: Particular samples required dilution due to matrix interferences. LOR values have been adjusted accordingly.
- 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.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.6	11.8	14.4	10.2	12.8
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	11.5	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	----
Chromium	7440-47-3	2	mg/kg	26	28	----	15	----
Copper	7440-50-8	5	mg/kg	6	15	----	5	----
Lead	7439-92-1	5	mg/kg	11	12	----	8	----
Nickel	7440-02-0	2	mg/kg	9	12	----	5	----
Zinc	7440-66-6	5	mg/kg	12	22	----	7	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	----
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	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
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	----	----	----	----
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	----	----	----	----
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**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	----	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	<0.04	----	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	<0.04	----	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	<0.04	----	----	----	----
MCPA	94-74-6	0.02	mg/kg	<0.04	----	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.04	----	----	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.04	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	----	----	----	----
MCPB	94-81-5	0.02	mg/kg	<0.04	----	----	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.04	----	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	----	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0005**	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0042**	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**75.7**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	102	----	98.2	----	107
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	86.1	----	55.7	----	61.4
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	85.3	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	92.2	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	96.4	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	88.1	101	----	101	----
2-Chlorophenol-D4	93951-73-6	0.5	%	93.3	102	----	101	----
2.4.6-Tribromophenol	118-79-6	0.5	%	84.4	77.8	----	77.6	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	99.4	101	----	103	----
Anthracene-d10	1719-06-8	0.5	%	104	110	----	106	----
4-Terphenyl-d14	1718-51-0	0.5	%	98.5	110	----	110	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.6	97.9	----	98.4	----
Toluene-D8	2037-26-5	0.2	%	99.8	105	----	106	----
4-Bromofluorobenzene	460-00-4	0.2	%	92.9	112	----	111	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	81.8	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	106	----	----	----	94.5
13C8-PFOA	----	0.0002	%	82.5	----	----	----	93.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.6	14.5	12.7	11.2	14.0
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	----	----	----	18.3	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	A. SMYLIE	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	----
Organic Fibre	----	0.1	g/kg	----	----	----	No	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	18	30	34	26
Copper	7440-50-8	5	mg/kg	----	15	16	7	17
Lead	7439-92-1	5	mg/kg	----	11	10	11	14
Nickel	7440-02-0	2	mg/kg	----	15	12	11	11
Zinc	7440-66-6	5	mg/kg	----	13	24	9	10
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
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	----	<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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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	----	----
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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
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	----	----
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	----	----
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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.2	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	<50
C15 - C28 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50
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
>C16 - C34 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	----	<0.04	----
2.4-DB	94-82-6	0.02	mg/kg	----	----	----	<0.04	----
Dicamba	1918-00-9	0.02	mg/kg	----	----	----	<0.04	----
Mecoprop	93-65-2	0.02	mg/kg	----	----	----	<0.04	----
MCPA	94-74-6	0.02	mg/kg	----	----	----	<0.04	----
2.4-DP	120-36-5	0.02	mg/kg	----	----	----	<0.04	----
2.4-D	94-75-7	0.02	mg/kg	----	----	----	<0.04	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-T	93-76-5	0.02	mg/kg	----	----	----	<0.04	----
MCPB	94-81-5	0.02	mg/kg	----	----	----	<0.04	----
Picloram	1918-02-1	0.02	mg/kg	----	----	----	<0.04	----
Clopyralid	1702-17-6	0.02	mg/kg	----	----	----	<0.04	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	----	<0.04	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	**0.0007**	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	**0.0007**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	**0.0007**	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	**0.0007**	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**84.9**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	105	----	112	108	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.7	----	74.2	82.1	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	87.7	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	83.8	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	84.6	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	102	89.6	92.8	98.0
2-Chlorophenol-D4	93951-73-6	0.5	%	----	94.2	95.9	97.2	96.7
2.4.6-Tribromophenol	118-79-6	0.5	%	----	63.7	77.8	81.1	74.5
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	97.4	102	103	101
Anthracene-d10	1719-06-8	0.5	%	----	102	106	108	105
4-Terphenyl-d14	1718-51-0	0.5	%	----	110	99.4	99.4	112
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	90.5	93.8	95.0	90.9
Toluene-D8	2037-26-5	0.2	%	----	95.6	90.6	98.5	93.4
4-Bromofluorobenzene	460-00-4	0.2	%	----	107	83.6	108	103
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	----	80.9	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	98.5	----	----
13C8-PFOA	----	0.0002	%	----	----	92.0	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.0	7.8	15.4	14.8	13.0
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	----	31.6	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	A. SMYLIE	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	----	----
Organic Fibre	----	0.1	g/kg	----	No	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	29	24	36
Copper	7440-50-8	5	mg/kg	----	----	16	14	13
Lead	7439-92-1	5	mg/kg	----	----	12	11	12
Nickel	7440-02-0	2	mg/kg	----	----	11	12	9
Zinc	7440-66-6	5	mg/kg	----	----	12	13	10
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
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	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
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)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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	<0.04	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	----	<0.04	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	----	<0.04	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	----	<0.04	----	----	----
MCPA	94-74-6	0.02	mg/kg	----	<0.04	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	----	<0.04	----	----	----
2.4-D	94-75-7	0.02	mg/kg	----	<0.04	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	----	<0.04	----	----	----
MCPB	94-81-5	0.02	mg/kg	----	<0.04	----	----	----
Picloram	1918-02-1	0.02	mg/kg	----	<0.04	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	----	<0.04	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	<0.04	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**84.2**	----	**92.4**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	106	114	108	----	114
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	70.0	95.4	76.2	----	75.8
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	82.3	----	89.2
Toluene-D8	2037-26-5	0.5	%	----	----	84.0	----	84.6
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	84.2	----	83.3
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	86.8	103	90.9
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	95.1	97.8	98.4
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	79.1	67.6	75.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	102	102	103
Anthracene-d10	1719-06-8	0.5	%	----	----	105	100	108
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	99.5	112	99.7
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	88.3	96.8	95.4
Toluene-D8	2037-26-5	0.2	%	----	----	90.8	101	92.0
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	88.6	109	85.4
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	82.0	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	110	----	99.5	----	99.0
13C8-PFOA	----	0.0002	%	95.5	----	82.0	----	83.0

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	20.3	----	----	15.6
Moisture Content	----	1.0	%	17.3	----	18.2	16.4	----
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	7.65	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	29	19	----
Copper	7440-50-8	5	mg/kg	----	----	16	11	----
Lead	7439-92-1	5	mg/kg	----	----	12	12	----
Nickel	7440-02-0	2	mg/kg	----	----	16	11	----
Zinc	7440-66-6	5	mg/kg	----	----	16	9	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	<0.1	----
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	----	<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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
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
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
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**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	95.5	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	107	----	105	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	94.8	----	64.4	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	95.8
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	103
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	98.7
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	85.2	100	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	92.7	103	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	70.8	68.2	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	99.5	93.0	----
Anthracene-d10	1719-06-8	0.5	%	----	----	102	104	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	95.3	104	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	97.1	95.2	----
Toluene-D8	2037-26-5	0.2	%	----	----	101	98.9	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	108	104	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	108	----	----	----	----
13C8-PFOA	----	0.0002	%	77.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	12.0	16.1	13.2	15.4	11.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	37	----	----	25	20
Copper	7440-50-8	5	mg/kg	6	----	----	12	6
Lead	7439-92-1	5	mg/kg	11	----	----	11	10
Nickel	7440-02-0	2	mg/kg	7	----	----	11	6
Zinc	7440-66-6	5	mg/kg	7	----	----	14	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	----	----
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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	----	----
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	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
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	----	----	----
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								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ 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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	----	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	<0.04	----	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	<0.04	----	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	<0.04	----	----	----	----
MCPA	94-74-6	0.02	mg/kg	<0.04	----	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.04	----	----	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.04	----	----	----	----
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	----	----	----	----
MCPB	94-81-5	0.02	mg/kg	<0.04	----	----	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.04	----	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	----	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**110**	**111**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**67.2**	**63.9**	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	**93.6**	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	**97.2**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	**94.9**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**95.8**	----	----	**95.7**	**95.6**
2-Chlorophenol-D4	93951-73-6	0.5	%	**102**	----	----	**102**	**102**
2.4.6-Tribromophenol	118-79-6	0.5	%	**89.2**	----	----	**83.6**	**79.1**
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.5	%	109	----	----	109	108
Anthracene-d10	1719-06-8	0.5	%	108	----	----	108	106
4-Terphenyl-d14	1718-51-0	0.5	%	110	----	----	109	108
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.1	----	----	78.9	86.2
Toluene-D8	2037-26-5	0.2	%	75.9	----	----	83.4	87.7
4-Bromofluorobenzene	460-00-4	0.2	%	91.4	----	----	87.0	89.4
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	82.8	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	105	----	----	116
13C8-PFOA	----	0.0002	%	----	72.5	----	----	79.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	16.8	----	----
Moisture Content	----	1.0	%	19.1	13.7	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	35	----	----	----	----
Copper	7440-50-8	5	mg/kg	18	----	----	----	----
Lead	7439-92-1	5	mg/kg	13	----	----	----	----
Nickel	7440-02-0	2	mg/kg	11	----	----	----	----
Zinc	7440-66-6	5	mg/kg	17	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
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	----	----	----
^ 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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----	----
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	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
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	----	----	<10	<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	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	<10	<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	----	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	91.1	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	109	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	57.5	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	89.4	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	98.0	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	78.0	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	106	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	106	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	106	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	79.2	----	----	99.3	109
Toluene-D8	2037-26-5	0.2	%	75.7	----	----	81.4	104
4-Bromofluorobenzene	460-00-4	0.2	%	85.9	----	----	96.8	108

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP SPIKE_01	TRIP SPIKE_02	TSC 1	TSC 2	----
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	ES2020331-041	ES2020331-042	ES2020331-043	ES2020331-044	--------
				Result	Result	Result	Result	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	-	mg/kg	Not Authorised	Not Authorised	----	----	----
C6 - C9 Fraction	----	10	mg/kg	----	----	Not Authorised	Not Authorised	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	-	mg/kg	Not Authorised	Not Authorised	----	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	Not Authorised	Not Authorised	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	-	mg/kg	Not Authorised	Not Authorised	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	Not Authorised	Not Authorised	----
EP080: BTEXN								
Benzene	71-43-2	-	mg/kg	Not Authorised	Not Authorised	----	----	----
Benzene	71-43-2	0.2	mg/kg	----	----	Not Authorised	Not Authorised	----
Toluene	108-88-3	-	mg/kg	Not Authorised	Not Authorised	----	----	----
Toluene	108-88-3	0.5	mg/kg	----	----	Not Authorised	Not Authorised	----
Ethylbenzene	100-41-4	-	mg/kg	Not Authorised	Not Authorised	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	Not Authorised	Not Authorised	----
meta- & para-Xylene	108-38-3 106-42-3	-	mg/kg	Not Authorised	Not Authorised	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	Not Authorised	Not Authorised	----
ortho-Xylene	95-47-6	-	mg/kg	Not Authorised	Not Authorised	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	Not Authorised	Not Authorised	----
^ Sum of BTEX	----	-	mg/kg	Not Authorised	Not Authorised	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	----	----	Not Authorised	Not Authorised	----
^ Total Xylenes	----	-	mg/kg	Not Authorised	Not Authorised	----	----	----
^ Total Xylenes	----	0.5	mg/kg	----	----	Not Authorised	Not Authorised	----
Naphthalene	91-20-3	-	mg/kg	Not Authorised	Not Authorised	----	----	----
Naphthalene	91-20-3	1	mg/kg	----	----	Not Authorised	Not Authorised	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	-	%	Not Authorised	Not Authorised	----	----	----
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	Not Authorised	Not Authorised	----
Toluene-D8	2037-26-5	-	%	Not Authorised	Not Authorised	----	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	Not Authorised	Not Authorised	----
4-Bromofluorobenzene	460-00-4	-	%	Not Authorised	Not Authorised	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	Not Authorised	Not Authorised	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200610	----	----	----	----
			Client sampling date / time	10-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2020331-038	--------	--------	--------	--------
				Result	----	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----

Analytical Results

Descriptive Results

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	BH01_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH03_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH04_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH05_0.1 - 10-Jun-2020 00:00	Mid brown soil.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

CERTIFICATE OF ANALYSIS

Work Order	: **ES2020331**	Page	: 1 of 49
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 12-Jun-2020 11:10
Order number	: ----	Date Analysis Commenced	: 15-Jun-2020
C-O-C number	: ----	Issue Date	: 19-Jun-2020 17:23
Sampler	: ALEX TENNANT, DANIEL CONDON		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 52		
No. of samples analysed	: 35		

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*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

- EP202: Particular samples required dilution due to matrix interferences. LOR values have been adjusted accordingly.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.6	11.8	14.4	10.2	12.8
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	11.5	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	----
Chromium	7440-47-3	2	mg/kg	26	28	----	15	----
Copper	7440-50-8	5	mg/kg	6	15	----	5	----
Lead	7439-92-1	5	mg/kg	11	12	----	8	----
Nickel	7440-02-0	2	mg/kg	9	12	----	5	----
Zinc	7440-66-6	5	mg/kg	12	22	----	7	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	----
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	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
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	----	----	----	----
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	----	----	----	----
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**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	----	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	<0.04	----	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	<0.04	----	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	<0.04	----	----	----	----
MCPA	94-74-6	0.02	mg/kg	<0.04	----	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.04	----	----	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.04	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	----	----	----	----
MCPB	94-81-5	0.02	mg/kg	<0.04	----	----	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.04	----	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	----	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0005**	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0042**	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0047**	----	----	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**75.7**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH01_0.1	BH01_1.0	BH01_2.0	BH02_0.1	BH02_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-001	ES2020331-003	ES2020331-004	ES2020331-006	ES2020331-007
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	102	----	98.2	----	107
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	86.1	----	55.7	----	61.4
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	85.3	----	----	----	----
Toluene-D8	2037-26-5	0.5	%	92.2	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	96.4	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	88.1	101	----	101	----
2-Chlorophenol-D4	93951-73-6	0.5	%	93.3	102	----	101	----
2.4.6-Tribromophenol	118-79-6	0.5	%	84.4	77.8	----	77.6	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	99.4	101	----	103	----
Anthracene-d10	1719-06-8	0.5	%	104	110	----	106	----
4-Terphenyl-d14	1718-51-0	0.5	%	98.5	110	----	110	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.6	97.9	----	98.4	----
Toluene-D8	2037-26-5	0.2	%	99.8	105	----	106	----
4-Bromofluorobenzene	460-00-4	0.2	%	92.9	112	----	111	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	81.8	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	106	----	----	----	94.5
13C8-PFOA	----	0.0002	%	82.5	----	----	----	93.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.6	14.5	12.7	11.2	14.0
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	----	----	----	18.3	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	A. SMYLIE	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	----
Organic Fibre	----	0.1	g/kg	----	----	----	No	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	18	30	34	26
Copper	7440-50-8	5	mg/kg	----	15	16	7	17
Lead	7439-92-1	5	mg/kg	----	11	10	11	14
Nickel	7440-02-0	2	mg/kg	----	15	12	11	11
Zinc	7440-66-6	5	mg/kg	----	13	24	9	10
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
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	----	<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	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	----
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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	----	----
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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
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	----	----
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	----	----
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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	1.2	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	<50
C15 - C28 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50
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
>C16 - C34 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	----	<0.04	----
2.4-DB	94-82-6	0.02	mg/kg	----	----	----	<0.04	----
Dicamba	1918-00-9	0.02	mg/kg	----	----	----	<0.04	----
Mecoprop	93-65-2	0.02	mg/kg	----	----	----	<0.04	----
MCPA	94-74-6	0.02	mg/kg	----	----	----	<0.04	----
2.4-DP	120-36-5	0.02	mg/kg	----	----	----	<0.04	----
2.4-D	94-75-7	0.02	mg/kg	----	----	----	<0.04	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-T	93-76-5	0.02	mg/kg	----	----	----	<0.04	----
MCPB	94-81-5	0.02	mg/kg	----	----	----	<0.04	----
Picloram	1918-02-1	0.02	mg/kg	----	----	----	<0.04	----
Clopyralid	1702-17-6	0.02	mg/kg	----	----	----	<0.04	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	----	<0.04	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	**0.0007**	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	**0.0007**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	**0.0007**	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	**0.0007**	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**84.9**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH02_1.0	BH02_2.8	QA01	BH03_0.1	BH03_0.5
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-008	ES2020331-010	ES2020331-011	ES2020331-012	ES2020331-013
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	105	----	112	108	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	59.7	----	74.2	82.1	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	87.7	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	83.8	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	84.6	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	102	89.6	92.8	98.0
2-Chlorophenol-D4	93951-73-6	0.5	%	----	94.2	95.9	97.2	96.7
2.4.6-Tribromophenol	118-79-6	0.5	%	----	63.7	77.8	81.1	74.5
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	97.4	102	103	101
Anthracene-d10	1719-06-8	0.5	%	----	102	106	108	105
4-Terphenyl-d14	1718-51-0	0.5	%	----	110	99.4	99.4	112
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	90.5	93.8	95.0	90.9
Toluene-D8	2037-26-5	0.2	%	----	95.6	90.6	98.5	93.4
4-Bromofluorobenzene	460-00-4	0.2	%	----	107	83.6	108	103
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	----	80.9	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	98.5	----	----
13C8-PFOA	----	0.0002	%	----	----	92.0	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.0	7.8	15.4	14.8	13.0
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	----	31.6	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	A. SMYLIE	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	No	----	----	----
Organic Fibre	----	0.1	g/kg	----	No	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	----	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	29	24	36
Copper	7440-50-8	5	mg/kg	----	----	16	14	13
Lead	7439-92-1	5	mg/kg	----	----	12	11	12
Nickel	7440-02-0	2	mg/kg	----	----	11	12	9
Zinc	7440-66-6	5	mg/kg	----	----	12	13	10
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
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	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP074D: Fumigants								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
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)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**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	<0.04	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	----	<0.04	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	----	<0.04	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	----	<0.04	----	----	----
MCPA	94-74-6	0.02	mg/kg	----	<0.04	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	----	<0.04	----	----	----
2.4-D	94-75-7	0.02	mg/kg	----	<0.04	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Triclopyr	55335-06-3	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	----	<0.04	----	----	----
MCPB	94-81-5	0.02	mg/kg	----	<0.04	----	----	----
Picloram	1918-02-1	0.02	mg/kg	----	<0.04	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	----	<0.04	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	<0.04	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	<0.0002	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**84.2**	----	**92.4**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH03_1.0	BH04_0.1	BH04_0.5	BH04_2.0	QA03
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-014	ES2020331-017	ES2020331-018	ES2020331-020	ES2020331-022
				Result	Result	Result	Result	Result
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	106	114	108	----	114
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	70.0	95.4	76.2	----	75.8
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	82.3	----	89.2
Toluene-D8	2037-26-5	0.5	%	----	----	84.0	----	84.6
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	84.2	----	83.3
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	86.8	103	90.9
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	95.1	97.8	98.4
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	79.1	67.6	75.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	102	102	103
Anthracene-d10	1719-06-8	0.5	%	----	----	105	100	108
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	99.5	112	99.7
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	88.3	96.8	95.4
Toluene-D8	2037-26-5	0.2	%	----	----	90.8	101	92.0
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	88.6	109	85.4
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	82.0	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	110	----	99.5	----	99.0
13C8-PFOA	----	0.0002	%	95.5	----	82.0	----	83.0

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	20.3	----	----	15.6
Moisture Content	----	1.0	%	17.3	----	18.2	16.4	----
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	7.65	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	----	----	----	----
Organic Fibre	----	0.1	g/kg	No	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	29	19	----
Copper	7440-50-8	5	mg/kg	----	----	16	11	----
Lead	7439-92-1	5	mg/kg	----	----	12	12	----
Nickel	7440-02-0	2	mg/kg	----	----	16	11	----
Zinc	7440-66-6	5	mg/kg	----	----	16	9	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	<0.1	----
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	----	<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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
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
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
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**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
^ 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								
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	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	95.5	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	107	----	105	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	94.8	----	64.4	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	95.8
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	103
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	98.7
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	85.2	100	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	92.7	103	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	70.8	68.2	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	99.5	93.0	----
Anthracene-d10	1719-06-8	0.5	%	----	----	102	104	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH05_0.1	BH05_0.5	BH05_1.0	BH05_2.0	BH05_2.7
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-023	ES2020331-024	ES2020331-025	ES2020331-026	ES2020331-027
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	95.3	104	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	97.1	95.2	----
Toluene-D8	2037-26-5	0.2	%	----	----	101	98.9	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	108	104	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	108	----	----	----	----
13C8-PFOA	----	0.0002	%	77.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	12.0	16.1	13.2	15.4	11.6
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	37	----	----	25	20
Copper	7440-50-8	5	mg/kg	6	----	----	12	6
Lead	7439-92-1	5	mg/kg	11	----	----	11	10
Nickel	7440-02-0	2	mg/kg	7	----	----	11	6
Zinc	7440-66-6	5	mg/kg	7	----	----	14	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	<0.05	----	----
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	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	----	----
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	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
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	----	----	----
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								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	----	----	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ 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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	----	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	<0.04	----	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	<0.04	----	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	<0.04	----	----	----	----
MCPA	94-74-6	0.02	mg/kg	<0.04	----	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	<0.04	----	----	----	----
2.4-D	94-75-7	0.02	mg/kg	<0.04	----	----	----	----
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	----	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	----	----	----	----
MCPB	94-81-5	0.02	mg/kg	<0.04	----	----	----	----
Picloram	1918-02-1	0.02	mg/kg	<0.04	----	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	----	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	<0.0002	----	----	**0.0003**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**110**	**111**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**67.2**	**63.9**	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	**93.6**	----	----	----
Toluene-D8	2037-26-5	0.5	%	----	**97.2**	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	**94.9**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**95.8**	----	----	**95.7**	**95.6**
2-Chlorophenol-D4	93951-73-6	0.5	%	**102**	----	----	**102**	**102**
2.4.6-Tribromophenol	118-79-6	0.5	%	**89.2**	----	----	**83.6**	**79.1**
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH06_0.1	BH06_0.5	BH06_1.0	BH06_2.0	MW03A_0.1
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	09-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-028	ES2020331-029	ES2020331-030	ES2020331-031	ES2020331-033
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.5	%	109	----	----	109	108
Anthracene-d10	1719-06-8	0.5	%	108	----	----	108	106
4-Terphenyl-d14	1718-51-0	0.5	%	110	----	----	109	108
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	83.1	----	----	78.9	86.2
Toluene-D8	2037-26-5	0.2	%	75.9	----	----	83.4	87.7
4-Bromofluorobenzene	460-00-4	0.2	%	91.4	----	----	87.0	89.4
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	82.8	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	105	----	----	116
13C8-PFOA	----	0.0002	%	----	72.5	----	----	79.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	16.8	----	----
Moisture Content	----	1.0	%	19.1	13.7	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	35	----	----	----	----
Copper	7440-50-8	5	mg/kg	18	----	----	----	----
Lead	7439-92-1	5	mg/kg	13	----	----	----	----
Nickel	7440-02-0	2	mg/kg	11	----	----	----	----
Zinc	7440-66-6	5	mg/kg	17	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
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	----	----	----
^ 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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----	----
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	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
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	----	----	<10	<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	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	----	----	<10	<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	----	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	MW03A_0.5	MW03A_1.0	MW03A_2.0	TRIP BLANK_01	TRIP BLANK_02
			Client sampling date / time	09-Jun-2020 00:00	09-Jun-2020 00:00	09-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020331-034	ES2020331-035	ES2020331-036	ES2020331-039	ES2020331-040
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	----	----	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	91.1	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	109	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	57.5	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	89.4	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	98.0	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	78.0	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	106	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	106	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	106	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	79.2	----	----	99.3	109
Toluene-D8	2037-26-5	0.2	%	75.7	----	----	81.4	104
4-Bromofluorobenzene	460-00-4	0.2	%	85.9	----	----	96.8	108

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP SPIKE_01	TRIP SPIKE_02	TSC 1	TSC 2	----
			Client sampling date / time	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	10-Jun-2020 00:00	----
Compound	CAS Number	LOR	Unit	ES2020331-041	ES2020331-042	ES2020331-043	ES2020331-044	--------
				Result	Result	Result	Result	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	44	55	75	102	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	66	77	89	123	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	43	52	49	67	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	0.3	0.4	0.3	0.4	----
Toluene	108-88-3	0.5	mg/kg	14.6	16.1	17.9	25.0	----
Ethylbenzene	100-41-4	0.5	mg/kg	1.8	2.0	2.8	3.9	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	4.7	4.8	14.0	19.3	----
ortho-Xylene	95-47-6	0.5	mg/kg	1.6	1.6	5.4	7.4	----
^ Sum of BTEX	----	0.2	mg/kg	23.0	24.9	40.4	56.0	----
^ Total Xylenes	----	0.5	mg/kg	6.3	6.4	19.4	26.7	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	102	98.3	103	101	----
Toluene-D8	2037-26-5	0.2	%	115	111	109	114	----
4-Bromofluorobenzene	460-00-4	0.2	%	123	116	117	120	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200610	----	----	----	----
			Client sampling date / time	10-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2020331-038	--------	--------	--------	--------
				Result	----	----	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----

Analytical Results

Descriptive Results

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	BH01_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH03_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH04_0.1 - 10-Jun-2020 00:00	Mid brown soil.
EA200: Description	BH05_0.1 - 10-Jun-2020 00:00	Mid brown soil.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2020331**	Page	: 1 of 27
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 12-Jun-2020
Order number	: ----	Date Analysis Commenced	: 15-Jun-2020
C-O-C number	: ----	Issue Date	: 19-Jun-2020
Sampler	: ALEX TENNANT, DANIEL CONDON		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 52		
No. of samples analysed	: 35		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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: 3083405)									
ES2020331-001	BH01_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	26	18	33.5	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	9	9	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	6	6	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	10	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	12	12	0.00	No Limit
ES2020331-025	BH05_1.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	29	21	30.2	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	16	12	28.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	14	16.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	11	14.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	16	13	21.7	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3083408)									
ES2020331-006	BH02_0.1	EA055: Moisture Content	----	0.1	%	10.2	9.6	6.23	0% - 50%
ES2020331-031	BH06_2.0	EA055: Moisture Content	----	0.1	%	15.4	13.2	15.7	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3085113)									
ES2020331-008	BH02_1.0	EA055: Moisture Content	----	0.1	%	10.6	10.4	2.28	0% - 50%
ES2020767-002	Anonymous	EA055: Moisture Content	----	0.1	%	13.6	12.9	5.45	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3083404)									
ES2020331-001	BH01_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2020331-025	BH05_1.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3077962)									

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 (%)
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3077962) - continued									
ES2020310-002	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3077967)									
ES2020370-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3077961)									
ES2020331-025	BH05_1.0	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
ES2020310-002	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<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

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: 3077961) - continued									
ES2020310-002	Anonymous	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3077961)									
ES2020331-025	BH05_1.0	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
ES2020310-002	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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: 3077961) - continued									
ES2020310-002	Anonymous	EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074D: Fumigants (QC Lot: 3078902)									
ES2020306-002	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: 3080014)									
ES2020431-002	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
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3078902)									
ES2020306-002	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

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: 3078902) - continued									
ES2020306-002	Anonymous	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: 3080014)									
ES2020431-002	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
EP074F: Halogenated Aromatic Compounds (QC Lot: 3078902)									
ES2020306-002	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

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: 3078902) - continued									
ES2020306-002	Anonymous	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: 3080014)									
ES2020431-002	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
EP074G: Trihalomethanes (QC Lot: 3078902)									
ES2020306-002	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: 3080014)									
ES2020431-002	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3077960)									
ES2020331-025	BH05_1.0	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

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: 3077960) - continued									
ES2020331-025	BH05_1.0	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2020310-002	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3077966)									
ES2020331-003	BH01_1.0	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

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)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3077966) - continued									
ES2020331-003	BH01_1.0	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2020370-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<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	1.4	1.5	9.78	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	1.5	1.6	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.6	0.7	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.5	0.6	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	0.7	0.8	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	0.6	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	5.2	5.8	10.9	0% - 50%
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	0.6	0.8	17.4	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3077959)									
ES2020331-025	BH05_1.0	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2020310-002	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3077965)									
ES2020331-003	BH01_1.0	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2020370-001	Anonymous	EP071: C15 - C28 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: 3077965) - continued									
ES2020370-001	Anonymous	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3078903)									
ES2020306-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3080013)									
ES2020291-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2020331-003	BH01_1.0	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3082689)									
ES2020306-011	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2020483-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3077959)									
ES2020331-025	BH05_1.0	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2020310-002	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3077965)									
ES2020331-003	BH01_1.0	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2020370-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	100	100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3078903)									
ES2020306-002	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: 3080013)									
ES2020291-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2020331-003	BH01_1.0	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: 3082689)									
ES2020306-011	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2020483-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3078903)									
ES2020306-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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: 3078903) - continued									
ES2020306-002	Anonymous	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP080: BTEXN (QC Lot: 3080013)									
ES2020291-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
ES2020331-003	BH01_1.0	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: 3082689)									
ES2020306-011	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
ES2020483-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3079971)									
ES2020331-001	BH01_0.1	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

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 (%)
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3079971) - continued									
ES2020331-001	BH01_0.1	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
ES2020525-031	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
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3079047)									
ES2020331-007	BH02_0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
ES2020331-014	BH03_1.0	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3079047)									
ES2020331-007	BH02_0.5	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	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 (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3079047) - continued									
ES2020331-007	BH02_0.5	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
ES2020331-014	BH03_1.0	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3079047)									
ES2020331-007	BH02_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2020331-014	BH03_1.0	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	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					
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3079047) - continued									
ES2020331-014	BH03_1.0	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3079047)									
ES2020331-007	BH02_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2020331-014	BH03_1.0	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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: 3079948)									
ES2020368-001	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	<0.001	<0.001	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
ES2019729-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0005	0.0004	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.006	0.006	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	0.002	0.001	55.7	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	0.008	0.008	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.497	0.508	2.19	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3077954)									
WN2005316-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	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: 3083405)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	102	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	98.4	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	111	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	109	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	103	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	102	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	100	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3083404)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	100	70.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3077962)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	91.7	62.0	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3077967)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	81.1	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3077961)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	90.6	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	64.0	122

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: 3077961) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3077961)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	74.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.1	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	89.8	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	90.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	41.0	123
EP074D: Fumigants (QCLot: 3078902)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	97.0	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	96.9	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	96.6	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	94.7	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	97.4	63.0	115
EP074D: Fumigants (QCLot: 3080014)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	80.3	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	88.8	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	83.0	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	81.4	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	90.0	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3078902)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	105	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	97.9	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	100	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	99.4	47.0	141

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: 3078902) - continued								
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	105	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	102	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	99.9	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	97.8	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	99.2	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	96.9	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	99.2	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	96.8	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	102	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	98.4	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	97.8	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	98.7	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	95.7	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	96.4	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	95.3	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	104	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	98.3	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	97.9	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	98.2	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	101	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	97.4	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	95.2	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	106	50.0	128
EP074E: Halogenated Aliphatic Compounds (QCLot: 3080014)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	71.0	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	92.2	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	90.7	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	100	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	101	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	91.2	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	87.7	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	80.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	86.8	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	89.1	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	90.0	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	89.0	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	87.0	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	86.4	59.0	125

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: 3080014) - continued								
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	86.9	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	89.2	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	88.7	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	92.9	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	93.2	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	77.1	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	87.1	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	70.6	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	74.9	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	89.7	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	91.7	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	96.0	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	77.6	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	82.1	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 3078902)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	99.0	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	101	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	100	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	97.9	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	99.9	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	98.4	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	98.5	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	98.9	52.0	122
EP074F: Halogenated Aromatic Compounds (QCLot: 3080014)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	91.5	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	88.1	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	83.3	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	81.9	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	85.8	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	83.6	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	87.9	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	81.0	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	87.7	52.0	122
EP074G: Trihalomethanes (QCLot: 3078902)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	97.2	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	98.0	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	96.6	63.0	121

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: 3078902) - continued								
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	90.9	60.0	126
EP074G: Trihalomethanes (QCLot: 3080014)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	88.2	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	86.6	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	87.4	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	81.7	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3077960)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	96.0	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	97.3	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	103	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	103	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	106	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	104	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	102	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	103	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	102	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	99.6	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	103	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	94.1	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	93.4	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	93.4	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3077966)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.5	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.3	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	97.9	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	99.1	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.0	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	95.2	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	93.5	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	91.7	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.2	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	91.1	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	92.9	74.0	126

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3077966) - continued								
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	83.6	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	89.0	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3077959)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	91.1	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	91.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	87.7	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3077965)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	95.1	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	92.9	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	93.1	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3078903)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.6	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3080013)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.2	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082689)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	114	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090307)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	106	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3077959)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	89.3	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	83.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3077965)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	92.6	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.2	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	83.5	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3078903)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	81.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3080013)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	97.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082689)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	116	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090307)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	109	68.4	128
EP080: BTEXN (QCLot: 3078903)								

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
EP080: BTEXN (QCLot: 3078903) - continued								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	82.0	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	86.0	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	86.3	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.8	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	85.1	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.2	63.0	119
EP080: BTEXN (QCLot: 3080013)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	102	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	107	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	107	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.8	63.0	119
EP080: BTEXN (QCLot: 3082689)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	94.6	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	104	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	105	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	107	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	100	63.0	119
EP080: BTEXN (QCLot: 3090307)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	107	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	106	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	108	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	105	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.1	63.0	119
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079971)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	73.8	54.4	128
EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	73.2	45.5	130
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	72.7	51.7	135
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	87.2	60.0	130
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	74.9	56.8	131
EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	75.1	50.0	141

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
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079971) - continued								
EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	78.7	68.5	131
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	83.1	50.8	141
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	72.4	40.8	126
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	82.1	57.4	139
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	76.8	38.9	137
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	80.6	48.7	129
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	79.1	49.4	106
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	75.0	53.2	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3079047)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3079047)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	85.4	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.5	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3079047)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.5	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	77.1	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	101	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	114	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	61.0	139

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3079047)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	96.8	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	93.6	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	96.4	69.2	143

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: 3079948)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.0	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	90.5	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.9	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	90.2	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	88.5	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	89.0	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	90.8	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3077954)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	89.4	77.0	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: **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: 3083405)							
ES2020331-001	BH01_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	97.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	105	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	92.7	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	107	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	105	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	105	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	108	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3083404)							
ES2020331-001	BH01_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	92.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3077962)							
ES2020310-002	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	97.8	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
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3077967)							
ES2020370-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	98.3	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3077961)							
ES2020310-002	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	107	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.4	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	87.7	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	83.2	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	81.7	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	76.5	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3077961)							
ES2020310-002	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	83.4	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	93.5	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	79.5	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.6	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	73.3	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3078902)							
ES2020306-002	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	105	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	92.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3080014)							
ES2020431-002	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	79.6	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	86.1	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3078902)							
ES2020306-002	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	93.0	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3080014)							
ES2020431-002	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	91.1	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3077960)							
ES2020310-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	85.3	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	83.4	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3077966)							
ES2020370-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	99.2	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	87.7	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3077959)							
ES2020310-002	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	107	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	117	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	125	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3077965)							
ES2020370-001	Anonymous						

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: 3077965) - continued							
ES2020370-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	94.1	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	95.6	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	102	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3078903)							
ES2020306-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	115	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3080013)							
ES2020291-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	103	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082689)							
ES2020306-011	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	117	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3077959)							
ES2020310-002	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	121	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	127	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	119	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3077965)							
ES2020370-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	99.2	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	97.1	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	100	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3078903)							
ES2020306-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	119	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3080013)							
ES2020291-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082689)							
ES2020306-011	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	116	70.0	130
EP080: BTEXN (QCLot: 3078903)							
ES2020306-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	84.3	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	80.2	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	81.1	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.2	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	81.1	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	85.3	70.0	130
EP080: BTEXN (QCLot: 3080013)							
ES2020291-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	98.7	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	103	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	105	70.0	130

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: BTEXN (QCLot: 3080013) - continued							
ES2020291-001	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	105	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	103	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	97.6	70.0	130
EP080: BTEXN (QCLot: 3082689)							
ES2020306-011	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	102	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	107	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	108	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	108	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	102	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	105	70.0	130
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079971)							
ES2020331-001	BH01_0.1	EP202: Mecoprop	93-65-2	0.1 mg/kg	79.5	60.0	140
		EP202: MCPA	94-74-6	0.1 mg/kg	65.3	57.0	143
		EP202: 2.4-D	94-75-7	0.1 mg/kg	85.9	68.0	139
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	62.7	51.0	145
		EP202: 2.4.5-T	93-76-5	0.1 mg/kg	94.7	57.0	142
		EP202: Picloram	1918-02-1	0.1 mg/kg	59.5	49.0	138
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	63.8	49.0	149
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3079047)							
ES2020331-007	BH02_0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	104	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	117	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	98.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	102	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	108	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3079047)							
ES2020331-007	BH02_0.5	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	95.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	106	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	122	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	115	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	116	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	113	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	102	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	86.8	66.0	139

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3079047) - continued							
ES2020331-007	BH02_0.5	EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	95.8	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3079047)							
ES2020331-007	BH02_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	86.0	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	96.2	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	88.3	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	104	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	114	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	82.0	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	97.6	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3079047)							
ES2020331-007	BH02_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	110	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	111	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	98.0	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	92.8	69.2	143

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
EG020T: Total Metals by ICP-MS (QCLot: 3079948)							
ES2019729-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	87.3	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	89.3	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	94.5	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	91.8	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	98.6	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	86.0	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	86.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3077954)							
ES2020331-038	RIN_200610	EG035T: Mercury	7439-97-6	0.01 mg/L	77.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2020331**	Page	: 1 of 12
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 12-Jun-2020
Site	: ----	Issue Date	: 19-Jun-2020
Sampler	: ALEX TENNANT, DANIEL CONDON	No. of samples received	: 52
Order number	: ----	No. of samples analysed	: 35

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
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
MW03A_0.1,	MW03A_0.5,	**09-Jun-2020**	**----**	----	----	**17-Jun-2020**	23-Jun-2020	✓
MW03A_1.0,	MW03A_2.0							
Soil Glass Jar - Unpreserved (EA055)								
BH01_0.1,	BH01_1.0,	**10-Jun-2020**	**----**	----	----	**17-Jun-2020**	24-Jun-2020	✓
BH01_2.0,	BH02_0.1,							
BH02_0.5,	BH02_1.0,							
BH02_2.8,	QA01,							
BH03_0.1,	BH03_0.5,							
BH03_1.0,	BH04_0.1,							
BH04_0.5,	BH04_2.0,							
QA03,	BH05_0.1,							
BH05_0.5,	BH05_1.0,							
BH05_2.0,	BH05_2.7,							
BH06_0.1,	BH06_0.5,							
BH06_1.0,	BH06_2.0							
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Subsampled by ALS (EA200)								
BH01_0.1,	BH03_0.1,	**10-Jun-2020**	**----**	----	----	**17-Jun-2020**	07-Dec-2020	✓
BH04_0.1,	BH05_0.1							
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	06-Dec-2020	✓	**17-Jun-2020**	06-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T)								
BH01_0.1,	BH01_1.0,	**10-Jun-2020**	**17-Jun-2020**	07-Dec-2020	✓	**17-Jun-2020**	07-Dec-2020	✓
BH02_0.1,	BH02_2.8,							
QA01,	BH03_0.1,							
BH03_0.5,	BH04_0.5,							
BH04_2.0,	QA03,							
BH05_1.0,	BH05_2.0,							
BH06_0.1,	BH06_2.0							

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)								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	07-Jul-2020	✓	**18-Jun-2020**	07-Jul-2020	✓
Soil Glass Jar - Unpreserved (EG035T)								
BH01_0.1,	BH01_1.0,	**10-Jun-2020**	**17-Jun-2020**	08-Jul-2020	✓	**18-Jun-2020**	08-Jul-2020	✓
BH02_0.1,	BH02_2.8,							
QA01,	BH03_0.1,							
BH03_0.5,	BH04_0.5,							
BH04_2.0,	QA03,							
BH05_1.0,	BH05_2.0,							
BH06_0.1,	BH06_2.0							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
MW03A_2.0		**09-Jun-2020**	**17-Jun-2020**	23-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP066)								
BH01_0.1,	QA01,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP066)								
BH05_0.5		**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
MW03A_1.0		**09-Jun-2020**	**16-Jun-2020**	23-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP068)								
BH01_0.1,	BH01_2.0,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH02_0.5,	BH02_1.0,							
QA01,	BH03_0.1,							
BH03_1.0,	BH04_0.1,							
BH04_0.5,	QA03,							
BH05_0.1,	BH05_1.0,							
BH06_0.5,	BH06_1.0							
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
MW03A_1.0		**09-Jun-2020**	**16-Jun-2020**	23-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP068)								
BH01_0.1,	BH01_2.0,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH02_0.5,	BH02_1.0,							
QA01,	BH03_0.1,							
BH03_1.0,	BH04_0.1,							
BH04_0.5,	QA03,							
BH05_0.1,	BH05_1.0,							
BH06_0.5,	BH06_1.0							

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
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP074)								
BH05_2.7,	BH06_0.5	**10-Jun-2020**	**16-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP074)								
BH05_2.7,	BH06_0.5	**10-Jun-2020**	**16-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP074)								
BH05_2.7,	BH06_0.5	**10-Jun-2020**	**16-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP074)								
BH05_2.7,	BH06_0.5	**10-Jun-2020**	**16-Jun-2020**	17-Jun-2020	✓	**17-Jun-2020**	17-Jun-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	23-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH01_0.1,	QA01,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH03_0.1,	BH04_0.5,							
QA03,	BH05_1.0							
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
BH02_2.8,	BH03_0.5,							
BH04_2.0,	BH05_2.0,							
BH06_0.1,	BH06_2.0							

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)								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	23-Jun-2020	✓	**18-Jun-2020**	23-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	24-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP071)								
BH01_0.1,	QA01,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH03_0.1,	BH04_0.5,							
QA03,	BH05_1.0							
Soil Glass Jar - Unpreserved (EP080)								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
BH02_2.8,	BH03_0.1,							
BH03_0.5,	BH04_2.0,							
BH05_1.0,	BH05_2.0							
Soil Glass Jar - Unpreserved (EP080)								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
BH02_2.8,	BH03_0.5,							
BH04_2.0,	BH05_2.0,							
BH06_0.1,	BH06_2.0,							
TRIP BLANK_01,	TRIP BLANK_02,							
TSC 1,	TSC 2							
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_01,	TRIP SPIKE_02	**10-Jun-2020**	**19-Jun-2020**	24-Jun-2020	✓	**19-Jun-2020**	24-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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	23-Jun-2020	✓	**18-Jun-2020**	23-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	24-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP071)								
BH01_0.1,	QA01,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH03_0.1,	BH04_0.5,							
QA03,	BH05_1.0							
Soil Glass Jar - Unpreserved (EP080)								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
BH02_2.8,	BH03_0.1,							
BH03_0.5,	BH04_2.0,							
BH05_1.0,	BH05_2.0							
Soil Glass Jar - Unpreserved (EP080)								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
BH02_2.8,	BH03_0.5,							
BH04_2.0,	BH05_2.0,							
BH06_0.1,	BH06_2.0,							
TRIP BLANK_01,	TRIP BLANK_02,							
TSC 1,	TSC 2							
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_01,	TRIP SPIKE_02	**10-Jun-2020**	**19-Jun-2020**	24-Jun-2020	✓	**19-Jun-2020**	24-Jun-2020	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
MW03A_0.1,	MW03A_0.5	**09-Jun-2020**	**17-Jun-2020**	23-Jun-2020	✓	**18-Jun-2020**	23-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080)								
BH01_0.1,	QA01,	**10-Jun-2020**	**15-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	24-Jun-2020	✓
BH04_0.5,	QA03							
Soil Glass Jar - Unpreserved (EP080)								
BH01_1.0,	BH02_0.1,	**10-Jun-2020**	**16-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
BH02_2.8,	BH03_0.1,							
BH03_0.5,	BH04_2.0,							
BH05_1.0,	BH05_2.0							
Soil Glass Jar - Unpreserved (EP080)								
BH06_0.1,	BH06_2.0,	**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**18-Jun-2020**	24-Jun-2020	✓
TRIP BLANK_01,	TRIP BLANK_02,							
TSC 1,	TSC 2							
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_01,	TRIP SPIKE_02	**10-Jun-2020**	**19-Jun-2020**	24-Jun-2020	✓	**19-Jun-2020**	24-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
EP202A: Phenoxyacetic Acid Herbicides by LCMS							
Soil Glass Jar - Unpreserved (EP202) BH01_0.1, BH03_0.1, BH04_0.1, BH06_0.1	**10-Jun-2020**	**17-Jun-2020**	24-Jun-2020	✓	**17-Jun-2020**	27-Jul-2020	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) MW03A_0.1	**09-Jun-2020**	**15-Jun-2020**	06-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
HDPE Soil Jar (EP231X) BH01_0.1, BH02_0.5, QA01, BH03_1.0, BH04_0.5, QA03, BH05_0.1, BH06_0.5	**10-Jun-2020**	**15-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) MW03A_0.1	**09-Jun-2020**	**15-Jun-2020**	06-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
HDPE Soil Jar (EP231X) BH01_0.1, BH02_0.5, QA01, BH03_1.0, BH04_0.5, QA03, BH05_0.1, BH06_0.5	**10-Jun-2020**	**15-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) MW03A_0.1	**09-Jun-2020**	**15-Jun-2020**	06-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
HDPE Soil Jar (EP231X) BH01_0.1, BH02_0.5, QA01, BH03_1.0, BH04_0.5, QA03, BH05_0.1, BH06_0.5	**10-Jun-2020**	**15-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) MW03A_0.1	**09-Jun-2020**	**15-Jun-2020**	06-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
HDPE Soil Jar (EP231X) BH01_0.1, BH02_0.5, QA01, BH03_1.0, BH04_0.5, QA03, BH05_0.1, BH06_0.5	**10-Jun-2020**	**15-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	25-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
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
MW03A_0.1	**09-Jun-2020**	**15-Jun-2020**	06-Dec-2020	✓	**16-Jun-2020**	25-Jul-2020	✓
HDPE Soil Jar (EP231X)							
BH01_0.1, BH02_0.5, QA01, BH03_1.0, BH04_0.5, QA03, BH05_0.1, BH06_0.5	**10-Jun-2020**	**15-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	25-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)							
RIN_200610	**10-Jun-2020**	**16-Jun-2020**	07-Dec-2020	✓	**16-Jun-2020**	07-Dec-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RIN_200610	**10-Jun-2020**	**----**	----	----	**15-Jun-2020**	08-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)							
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	27	14.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	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
TRH - Semivolatile Fraction	EP071	4	29	13.79	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	5	50	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	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
TRH - Semivolatile Fraction	EP071	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	50	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	12	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	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
TRH - Semivolatile Fraction	EP071	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	50	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	12	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	27	7.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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*	
Matrix Spikes (MS) - Continued							
Pesticides by GCMS	EP068	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	16	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	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
TRH - Semivolatile Fraction	EP071	2	29	**6.90**	**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	12	**16.67**	**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)							
Total Mercury by FIMS	EG035T	1	2	**50.00**	**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
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	2	**50.00**	**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
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	2	**50.00**	**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
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	2	**50.00**	**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

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 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
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)
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)
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.
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.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
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)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
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.
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.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.
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)

Environmental Division
Sydney
Work Order Reference
ES2020525

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CLIENT: EMM Consulting		**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):
OFFICE: 20 Chandos St, St Leonards			
PROJECT: Brunslea Park DSI	**PROJECT NO.:** J200300	**ALS QUOTE NO.:** ME/359/20	
ORDER NUMBER:	**PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:** Australia	
PROJECT MANAGER: Daniel Condon	**CONTACT PH:** 0439885614		
SAMPLER: Daniel Condon and Alex Tennant	**SAMPLER MOBILE:** 0439885614, 0430474184		
COC Emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**		
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net			
Email Invoice to: dcondon@emmconsulting.com.au			

COC SEQUENCE NUMBER (Circle)
COC: (1) 2 3 4 5 6 7
OF: 1 2 3 4 (5) 6 7

FOR LABORATORY
Custody Seal Intact?
Free ice / frozen ice bric receipt?
Random Sample Tempe
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	
YIK CHEONG	FATT		
DATE/TIME: 12/6/20 9:00	DATE/TIME: 15/6/20 11:30am	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	SS01	11/6/20	S		2							X		
2	SS02											X		
3	BH07_0.1						X		X					
4	BH07_0.5								X	X				
5	BH07_2.0									X				
6	BH08_0.1						X		X	X	X		X	
7	BH08_0.5								X					
8	BH08_1.0									X				
9	BH09_0.1					X		X	X	X				
10	BH09_0.5						X		X					
11	BH09_2.0									X				
12	BH10_0.1						X	X	X	X				
					TOTAL	1	4	2	7	7	1	2		

Subcon / Forward Lab / Spli
Lab / Analysis: Asbestos →
Organised By / Date Newcastle
Relinquished By / Date
Courier / Courier QAQC →
WO No: Envirolab
Attach By DO / Internal Sheet

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
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COC SEQUENCE NUMBER (Circle)
COC: 1 (2) 3 4 5 6 7
OF: 1 2 3 4 (5) 6 7

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:
YIK CHEONG	[illegible]		
DATE/TIME: 12/6/20 9:00	DATE/TIME: 15/6/20 11:20am	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).								Additional Information
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13	BH10_0.5	11/6/20	S		2				X					
14	BH10_1.0											X		
15	BH10_2.8									X				
16	BH11_0.1						X		X	X			X	
17	BH11_0.5								X	X				
18	BH11_2.0											X		
19	BH12_0.1					X	X	X	X	X	X		X	
20	BH12_0.5								X	X				
21	BH12_1.0							X						
22	BH12_2.0											X		
23	BH12_2.9											X		
24	BH13_0.1					X	X		X	X			X	
					TOTAL 24	2	3	2	6	6	1	4	3	

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FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
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Random Sample Temperature on Receipt: °C
Other comment:

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YIK CHEONG	[illegible]		
DATE/TIME: 12/6/20 9:00	DATE/TIME: 15/6/20 11:[illegible]	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP068 solids)	OCOP Pesticides (S-12)	8 Metals/TRH/BTEX/NPAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
25	BH13_0.5	11/6/20	S		2				X	X				
26	BH13_1.5											X		
27	BH14_0.1					X	X		X	X				
28	BH14_0.5								X	X				
29	BH14_1.0											X		
30	BH14_2.9											X		
31	BH15_0.1						X	X	X	X	X		X	
32	BH15_0.5								X					
33	BH15_1.0									X				
34	BH15_2.8											X		
35	BH16_0.1						X	X	X	X	X			
36	BH16_0.5								X	X				
				TOTAL	24	1	3	2	7	7	2	4	1	

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 31 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 48 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 5372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 6/585 Maitland Road 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):

ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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:
YIK CHEONG	FAXI		
DATE/TIME: 12/6/20 9:00	DATE/TIME: 15/6/20 11:30am	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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEX/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	TRH (C6-C9)	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
37	BH16_1.0	11/6/20	S		2							X		
38	BH16_2.0											X		
39	BH17_0.1						X		X	X				
40	BH17_0.5								X	X				
41	BH17_2.0											X		
42	BH18_0.1					X			X	X				
43	BH18_0.5						X		X	X	X			
44	BH18_2.0											X		
45	QA05						X	X	X	X	X			
x	QA06						X	X	X	X	X			FORWARD TO ENVIROLAB
46	TRIP BLANK 03				1								X	
47	TRIP BLANK 04				1								X	
				TOTAL	24	1	4	2	6	6	3	4	2	

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

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3/1 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 48 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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 Ford 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☑ Standard TAT (List due date):	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: 20 Chandos St, St Leonards		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300	**ALS QUOTE NO.:** ME/359/20	**COC SEQUENCE NUMBER (Circle)**	Free Ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:** Australia	COC: 1 2 3 4 (5) 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Daniel Condon	**CONTACT PH:** 0439885614	OF: 1 2 3 4 (5) 6 7	Other comment:
SAMPLER: Daniel Condon and Alex Tennant	**SAMPLER MOBILE:** 0439885614, 0430474184	**RELINQUISHED BY:** YIK CHEONG	**RECEIVED BY:**
COC Emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**	DATE/TIME: 12/6/20 9:00	DATE/TIME:
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net		**RELINQUISHED BY:**	**RECEIVED BY:**
Email Invoice to: dcondon@emmconsulting.com.au		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).							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals ~~(S-26)~~ ~~BM TRH/BTEXN/PAH~~	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXY ACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	TRIP													
48	~~MATRIX~~ TRIP SPIKE_03	11/6/20	S		2									
49	~~MATRIX~~ TRIP SPIKE_04	↓	S		2									
50	RIN_200611	↓	W		1									METALS ONLY
51	SW01	10/6/20	~~S~~/W		6		X		X	X				
52	SD01	10/6/20	S		2		X		X	X				
53	SW/SD02	11/6/20	S/W		8		X		X	X	X		X	
54	SW/SD03	↓	↓		↓		X		X	X	X		X	
55	SW/SD07						X	X	X	X	X		X	
56	SW/SD08						X	X	X	X	X		X	
57	SW/SD11						X	X	X	X				
58	SW/SD13	↓	↓		↓		X	X	X	X				
59	TSC													
					TOTAL	20		8	4	8	8	4		4	

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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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

Jessie Grealy

From: Tyler Anderson
Sent: Tuesday, 16 June 2020 10:16 AM
To: Jessie Grealy
Cc: Helen Simpson
Subject: FW: [EXTERNAL] - Confirming BH17_0.1 and BH17_0.5

Hi Jessie,

In regards to your comment for ES2020525, can you please keep these two samples on hold however scheduled sample #41 – BH17_2.0 for the analysis that sample #39 should have had?

Kind Regards,

Tyler Anderson
Client Services Coordinator, Environmental
Sydney

T +61 2 8784 8555 F +61 2 8784 8500
D +61 2 8784 8501
tyler.anderson@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

Environmental Division
Sydney
Work Order Reference
ES2020525
Telephone : +61-2-8784 8555

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EnviroMail™ 128 – Revised PFAS Bottle Requirements

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From: Dan Condon [mailto:dcondon@emmconsulting.com.au]
Sent: Monday, 15 June 2020 5:53 PM
To: Tyler Anderson <tyler.anderson@alsglobal.com>
Cc: Shane Colley <shane.colley@ALSGlobal.com>
Subject: RE: [EXTERNAL] - Confirming BH17_0.1 and BH17_0.5

Hi Tyler,

Thanks for sending through. Can you please run the analysis that was proposed for BH17_0.1 on the sample BH17_2.0 and keep both of these ones on hold for now.

Thanks,

Dan

Daniel Condon
Associate Environmental Scientist – Contaminated Land
0439 885 614

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2020525**
Amendment : **1**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: J200300 Brunslea Park DSI	Page	: 1 of 5
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: ALEX TENNANT, DANIEL CONDON		

Dates

Date Samples Received	: 15-Jun-2020 11:30	Issue Date	: 23-Jun-2020
Client Requested Due Date	: 22-Jun-2020	Scheduled Reporting Date	: **22-Jun-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 6	Temperature	: 7.1 - Ice present
Receipt Detail	:	No. of samples received / analysed	: 66 / 51

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- This is an updated SRN which indicates the addition of analysis for sample BH17_2.0.
- **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 direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

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

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

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

ES2020525-059 : [11-Jun-2020] : TRIP SPIKE CONTROL_03
ES2020525-060 : [11-Jun-2020] : TRIP SPIKE CONTROL_04

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 - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2020525-001	11-Jun-2020 00:00	SS01	✓						
ES2020525-002	11-Jun-2020 00:00	SS02	✓						
ES2020525-003	11-Jun-2020 00:00	BH07_0.1		✓			✓	✓	
ES2020525-004	11-Jun-2020 00:00	BH07_0.5		✓				✓	✓
ES2020525-005	11-Jun-2020 00:00	BH07_2.0		✓					✓
ES2020525-006	11-Jun-2020 00:00	BH08_0.1		✓	✓	✓	✓	✓	✓
ES2020525-007	11-Jun-2020 00:00	BH08_0.5		✓				✓	
ES2020525-008	11-Jun-2020 00:00	BH08_1.0		✓					✓
ES2020525-009	11-Jun-2020 00:00	BH09_0.1		✓				✓	✓
ES2020525-010	11-Jun-2020 00:00	BH09_0.5		✓			✓	✓	
ES2020525-011	11-Jun-2020 00:00	BH09_2.0		✓					✓
ES2020525-012	11-Jun-2020 00:00	BH10_0.1		✓			✓	✓	✓
ES2020525-013	11-Jun-2020 00:00	BH10_0.5		✓				✓	
ES2020525-014	11-Jun-2020 00:00	BH10_1.0	✓						
ES2020525-015	11-Jun-2020 00:00	BH10_2.8		✓					✓
ES2020525-016	11-Jun-2020 00:00	BH11_0.1		✓		✓	✓	✓	✓
ES2020525-017	11-Jun-2020 00:00	BH11_0.5		✓				✓	✓
ES2020525-018	11-Jun-2020 00:00	BH11_2.0	✓						
ES2020525-019	11-Jun-2020 00:00	BH12_0.1		✓	✓	✓	✓	✓	✓
ES2020525-020	11-Jun-2020 00:00	BH12_0.5		✓				✓	✓
ES2020525-021	11-Jun-2020 00:00	BH12_1.0		✓					
ES2020525-022	11-Jun-2020 00:00	BH12_2.0	✓						
ES2020525-023	11-Jun-2020 00:00	BH12_2.9	✓						
ES2020525-024	11-Jun-2020 00:00	BH13_0.1		✓		✓	✓	✓	✓
ES2020525-025	11-Jun-2020 00:00	BH13_0.5		✓				✓	✓
ES2020525-026	11-Jun-2020 00:00	BH13_1.5	✓						
ES2020525-027	11-Jun-2020 00:00	BH14_0.1		✓			✓	✓	✓
ES2020525-028	11-Jun-2020 00:00	BH14_0.5		✓				✓	✓
ES2020525-029	11-Jun-2020 00:00	BH14_1.0	✓						
ES2020525-030	11-Jun-2020 00:00	BH14_2.9	✓						
ES2020525-031	11-Jun-2020 00:00	BH15_0.1		✓	✓	✓	✓	✓	✓
ES2020525-032	11-Jun-2020 00:00	BH15_0.5		✓				✓	

			(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2020525-033	11-Jun-2020 00:00	BH15_1.0		✓					✓
ES2020525-034	11-Jun-2020 00:00	BH15_2.8	✓						
ES2020525-035	11-Jun-2020 00:00	BH16_0.1		✓	✓		✓	✓	✓
ES2020525-036	11-Jun-2020 00:00	BH16_0.5		✓				✓	✓
ES2020525-037	11-Jun-2020 00:00	BH16_1.0	✓						
ES2020525-038	11-Jun-2020 00:00	BH16_2.0	✓						
ES2020525-039	11-Jun-2020 00:00	BH17_0.1	✓						
ES2020525-040	11-Jun-2020 00:00	BH17_0.5	✓						
ES2020525-041	11-Jun-2020 00:00	BH17_2.0		✓			✓	✓	✓
ES2020525-042	11-Jun-2020 00:00	BH18_0.1		✓				✓	✓
ES2020525-043	11-Jun-2020 00:00	BH18_0.5		✓	✓		✓	✓	✓
ES2020525-044	11-Jun-2020 00:00	BH18_2.0	✓						
ES2020525-045	11-Jun-2020 00:00	QA05		✓	✓		✓	✓	✓
ES2020525-046	11-Jun-2020 00:00	TRIP BLANK_03		✓					
ES2020525-047	11-Jun-2020 00:00	TRIP BLANK_04		✓					
ES2020525-052	11-Jun-2020 00:00	SD01		✓			✓	✓	✓
ES2020525-053	11-Jun-2020 00:00	SD02		✓	✓	✓	✓	✓	✓
ES2020525-054	11-Jun-2020 00:00	SD03		✓	✓	✓	✓	✓	✓
ES2020525-055	11-Jun-2020 00:00	SD07		✓	✓	✓	✓	✓	✓
ES2020525-056	11-Jun-2020 00:00	SD08		✓	✓	✓	✓	✓	✓
ES2020525-057	11-Jun-2020 00:00	SD11		✓			✓	✓	✓
ES2020525-058	11-Jun-2020 00:00	SD13		✓			✓	✓	✓

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2020525-009	11-Jun-2020 00:00	BH09_0.1	✓	
ES2020525-012	11-Jun-2020 00:00	BH10_0.1	✓	
ES2020525-019	11-Jun-2020 00:00	BH12_0.1	✓	
ES2020525-021	11-Jun-2020 00:00	BH12_1.0	✓	
ES2020525-031	11-Jun-2020 00:00	BH15_0.1	✓	
ES2020525-035	11-Jun-2020 00:00	BH16_0.1	✓	
ES2020525-045	11-Jun-2020 00:00	QA05	✓	
ES2020525-046	11-Jun-2020 00:00	TRIP BLANK_03		✓

			SOIL - EP066 (solids) Polychlorinated Biphenyls by GCMS	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2020525-047	11-Jun-2020 00:00	TRIP BLANK_04		✓
ES2020525-048	11-Jun-2020 00:00	TRIP SPIKE_03		✓
ES2020525-049	11-Jun-2020 00:00	TRIP SPIKE_04		✓
ES2020525-055	11-Jun-2020 00:00	SD07	✓	
ES2020525-056	11-Jun-2020 00:00	SD08	✓	
ES2020525-057	11-Jun-2020 00:00	SD11	✓	
ES2020525-058	11-Jun-2020 00:00	SD13	✓	
ES2020525-059	11-Jun-2020 00:00	TRIP SPIKE CONTROL_03		✓
ES2020525-060	11-Jun-2020 00:00	TRIP SPIKE CONTROL_04		✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - EP231X PFAS - Full Suite (28 analytes)	WATER - EP231X-LL PFAS - Full Suite Low Level (29 analytes)	WATER - W-02T 8 metals (Total)	WATER - W-12 OC/OP Pesticides	WATER - W-26 TRH/BTEXN/PAH/8 Metals
ES2020525-050	11-Jun-2020 00:00	RIN_200611			✓		
ES2020525-051	11-Jun-2020 00:00	SW01		✓		✓	✓
ES2020525-061	11-Jun-2020 00:00	SW02	✓			✓	✓
ES2020525-062	11-Jun-2020 00:00	SW03	✓			✓	✓
ES2020525-063	11-Jun-2020 00:00	SW07	✓			✓	✓
ES2020525-064	11-Jun-2020 00:00	SW08	✓			✓	✓
ES2020525-065	11-Jun-2020 00:00	SW11	✓			✓	✓
ES2020525-066	11-Jun-2020 00:00	SW13	✓			✓	✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - EP066-PCB-WA Polychlorinated Biphenyls (PCB)	WATER - EP074DEFG VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	WATER - EP202SL Phenoxyacetic Acid
ES2020525-061	11-Jun-2020 00:00	SW02		✓	✓
ES2020525-062	11-Jun-2020 00:00	SW03		✓	✓
ES2020525-063	11-Jun-2020 00:00	SW07	✓	✓	✓
ES2020525-064	11-Jun-2020 00:00	SW08	✓	✓	✓
ES2020525-065	11-Jun-2020 00:00	SW11	✓		
ES2020525-066	11-Jun-2020 00:00	SW13	✓		

Proactive Holding Time Report

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

Requested Deliverables

ALEX TENNANT

- *AU Certificate of Analysis - NATA (COA)	Email	atennant@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	atennant@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	atennant@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	atennant@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	atennant@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	atennant@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	atennant@emmconsulting.com.au

ALL INVOICES

- A4 - AU Tax Invoice (INV)	Email	finance@emmconsulting.com.au

DANIEL CONDON

- *AU Certificate of Analysis - NATA (COA)	Email	dcondon@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	dcondon@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	dcondon@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	dcondon@emmconsulting.com.au
- A4 - AU Tax Invoice (INV)	Email	dcondon@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	dcondon@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	dcondon@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	dcondon@emmconsulting.com.au

EMM CONSULTING

- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net

CERTIFICATE OF ANALYSIS

Work Order	: **ES2020525**	Page	: 1 of 85
Amendment	: **1**		
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 15-Jun-2020 11:30
Order number	: ----	Date Analysis Commenced	: 16-Jun-2020
C-O-C number	: ----	Issue Date	: 23-Jun-2020 10:50
Sampler	: ALEX TENNANT, DANIEL CONDON		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 66		
No. of samples analysed	: 51		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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

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

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

- 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.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP071: Results of samples SW/SD07 and SW/SD08 have been confirmed by re-extraction and re-analysis.
- EG005: Poor precision was obtained for Chromium on sample ES2020525-58. Results have been confirmed by re-extraction and re-analysis.
- Amendment (23/06/2020): This report has been amended as a result of a request to change sample identification numbers (IDs) received by ALS from Dan Condon on 23/06/2020. All analysis results are as per the previous report.
- EP202: Particular samples required dilution due to matrix interferences. LOR values have been adjusted accordingly.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.Trip spike results confirmed by re-analysis.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	20.8	17.7	18.0	11.8	12.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	<5	8	----
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	----	29	33	58	----
Copper	7440-50-8	5	mg/kg	----	16	11	12	----
Lead	7439-92-1	5	mg/kg	----	11	10	16	----
Nickel	7440-02-0	2	mg/kg	----	18	14	18	----
Zinc	7440-66-6	5	mg/kg	----	24	34	14	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	<0.05	<0.05
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	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	<5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
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	----
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								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	<10	<10	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ 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	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	----	<0.04	----
2.4-DB	94-82-6	0.02	mg/kg	----	----	----	<0.04	----
Dicamba	1918-00-9	0.02	mg/kg	----	----	----	<0.04	----
Mecoprop	93-65-2	0.02	mg/kg	----	----	----	<0.04	----
MCPA	94-74-6	0.02	mg/kg	----	----	----	<0.04	----
2.4-DP	120-36-5	0.02	mg/kg	----	----	----	<0.04	----
2.4-D	94-75-7	0.02	mg/kg	----	----	----	<0.04	----
Triclopyr	55335-06-3	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	----	<0.04	----
2.4.5-T	93-76-5	0.02	mg/kg	----	----	----	<0.04	----
MCPB	94-81-5	0.02	mg/kg	----	----	----	<0.04	----
Picloram	1918-02-1	0.02	mg/kg	----	----	----	<0.04	----
Clopyralid	1702-17-6	0.02	mg/kg	----	----	----	<0.04	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	----	<0.04	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	<0.0005	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	<0.0005	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	<0.0002	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**101**	**101**	----	**98.0**	**101**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**87.6**	**87.4**	----	**81.6**	**84.9**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	**80.7**	----
Toluene-D8	2037-26-5	0.5	%	----	----	----	**98.5**	----
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	**96.9**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**90.7**	**88.7**	**88.6**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**90.9**	**88.2**	**89.2**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**69.4**	**64.2**	**62.7**	----
EP075(SIM)T: PAH Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH07_0.1	BH07_0.5	BH07_2.0	BH08_0.1	BH08_0.5
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-003	ES2020525-004	ES2020525-005	ES2020525-006	ES2020525-007
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
2-Fluorobiphenyl	321-60-8	0.5	%	----	97.9	95.5	97.9	----
Anthracene-d10	1719-06-8	0.5	%	----	102	100	101	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	102	99.2	101	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	98.8	97.0	84.8	----
Toluene-D8	2037-26-5	0.2	%	----	102	98.2	88.0	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	110	106	89.9	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	----	80.3	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	89.9	----	----	102	----
13C8-PFOA	----	0.0002	%	100	----	----	101	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	15.5	11.6	15.2	14.6	10.8
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	<5	----	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	47	39	----	51	18
Copper	7440-50-8	5	mg/kg	17	7	----	16	8
Lead	7439-92-1	5	mg/kg	14	20	----	11	12
Nickel	7440-02-0	2	mg/kg	27	12	----	18	10
Zinc	7440-66-6	5	mg/kg	21	9	----	23	12
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
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	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	<0.05	----	<0.05
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
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
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ 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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	**0.0002**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	<0.0002	----	**0.0002**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	**0.0002**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	<0.0002	----	**0.0002**
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**97.7**	----	----	**108**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**99.3**	**102**	----	**103**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**86.3**	**77.3**	----	**80.9**
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH08_1.0	BH09_0.1	BH09_0.5	BH09_2.0	BH10_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-008	ES2020525-009	ES2020525-010	ES2020525-011	ES2020525-012
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	0.5	%	92.1	93.2	----	88.7	92.0
2-Chlorophenol-D4	93951-73-6	0.5	%	93.4	91.9	----	89.2	91.6
2.4.6-Tribromophenol	118-79-6	0.5	%	63.5	66.2	----	57.4	61.2
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	102	102	----	96.1	100
Anthracene-d10	1719-06-8	0.5	%	106	108	----	100.0	104
4-Terphenyl-d14	1718-51-0	0.5	%	106	108	----	101	105
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	97.2	101	----	98.3	101
Toluene-D8	2037-26-5	0.2	%	99.0	100	----	98.2	103
4-Bromofluorobenzene	460-00-4	0.2	%	108	108	----	108	108
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	103	----	103
13C8-PFOA	----	0.0002	%	----	----	101	----	104

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	11.9	16.3	9.0	17.5	14.4
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	<5	<5	6	<5
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	28	37	48	37
Copper	7440-50-8	5	mg/kg	----	16	11	21	22
Lead	7439-92-1	5	mg/kg	----	13	12	14	13
Nickel	7440-02-0	2	mg/kg	----	23	15	32	17
Zinc	7440-66-6	5	mg/kg	----	28	15	26	26
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
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	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Chloromethane	74-87-3	5	mg/kg	----	----	----	----	<5
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	----	----	<0.5
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
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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	----	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
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
>C16 - C34 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	<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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	<0.04	----	<0.02
2.4-DB	94-82-6	0.02	mg/kg	----	----	<0.04	----	<0.02
Dicamba	1918-00-9	0.02	mg/kg	----	----	<0.04	----	<0.02
Mecoprop	93-65-2	0.02	mg/kg	----	----	<0.04	----	<0.02
MCPA	94-74-6	0.02	mg/kg	----	----	<0.04	----	<0.02
2.4-DP	120-36-5	0.02	mg/kg	----	----	<0.04	----	<0.02
2.4-D	94-75-7	0.02	mg/kg	----	----	<0.04	----	<0.02
Triclopyr	55335-06-3	0.02	mg/kg	----	----	<0.04	----	<0.02
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	<0.04	----	<0.02
2.4.5-T	93-76-5	0.02	mg/kg	----	----	<0.04	----	<0.02
MCPB	94-81-5	0.02	mg/kg	----	----	<0.04	----	<0.02
Picloram	1918-02-1	0.02	mg/kg	----	----	<0.04	----	<0.02
Clopyralid	1702-17-6	0.02	mg/kg	----	----	<0.04	----	<0.02
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	<0.04	----	<0.02
EP231A: Perfluoroalkyl Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	**112**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**97.8**	----	**93.0**	**101**	**97.9**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**81.6**	----	**76.7**	**74.1**	**70.6**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	----	**83.6**
Toluene-D8	2037-26-5	0.5	%	----	----	----	----	**93.2**
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	----	**98.0**
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10_0.5	BH10_2.8	BH11_0.1	BH11_0.5	BH12_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-013	ES2020525-015	ES2020525-016	ES2020525-017	ES2020525-019
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	0.5	%	----	88.8	90.8	87.8	88.2
2-Chlorophenol-D4	93951-73-6	0.5	%	----	89.7	91.5	89.3	89.2
2.4.6-Tribromophenol	118-79-6	0.5	%	----	59.8	58.2	56.1	56.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	97.3	98.8	96.7	95.8
Anthracene-d10	1719-06-8	0.5	%	----	102	101	101	99.8
4-Terphenyl-d14	1718-51-0	0.5	%	----	102	104	103	102
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	99.5	102	100	87.0
Toluene-D8	2037-26-5	0.2	%	----	98.0	99.6	100	83.0
4-Bromofluorobenzene	460-00-4	0.2	%	----	105	104	109	94.4
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	78.1	----	74.6
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	97.9	----	103
13C8-PFOA	----	0.0002	%	----	----	97.9	----	103

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	12.4	----	----	----
Moisture Content	----	1.0	%	11.3	----	10.8	8.2	7.2
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	----	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	50	----	15	23	13
Copper	7440-50-8	5	mg/kg	13	----	7	13	7
Lead	7439-92-1	5	mg/kg	9	----	10	10	8
Nickel	7440-02-0	2	mg/kg	9	----	6	9	10
Zinc	7440-66-6	5	mg/kg	14	----	13	26	15
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	<0.1	<0.1
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	----	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	----	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	<0.05	<0.05	<0.05
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	<0.5	<0.5	<0.5
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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	<50
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
>C16 - C34 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	----	<0.04	----	----
2.4-DB	94-82-6	0.02	mg/kg	----	----	<0.04	----	----
Dicamba	1918-00-9	0.02	mg/kg	----	----	<0.04	----	----
Mecoprop	93-65-2	0.02	mg/kg	----	----	<0.04	----	----
MCPA	94-74-6	0.02	mg/kg	----	----	<0.04	----	----
2.4-DP	120-36-5	0.02	mg/kg	----	----	<0.04	----	----
2.4-D	94-75-7	0.02	mg/kg	----	----	<0.04	----	----
Triclopyr	55335-06-3	0.02	mg/kg	----	----	<0.04	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	----	<0.04	----	----
2.4.5-T	93-76-5	0.02	mg/kg	----	----	<0.04	----	----
MCPB	94-81-5	0.02	mg/kg	----	----	<0.04	----	----
Picloram	1918-02-1	0.02	mg/kg	----	----	<0.04	----	----
Clopyralid	1702-17-6	0.02	mg/kg	----	----	<0.04	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	----	<0.04	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	**0.0006**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	<0.0005	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH12_0.5	BH12_1.0	BH13_0.1	BH13_0.5	BH14_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-020	ES2020525-021	ES2020525-024	ES2020525-025	ES2020525-027
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	<0.0002	----	0.0006
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	0.0006
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	<0.0002	----	0.0006
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	105	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	102	----	103	98.4	98.4
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	73.7	----	85.2	68.1	79.0
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	90.9	----	93.6	91.5	89.6
2-Chlorophenol-D4	93951-73-6	0.5	%	91.4	----	94.6	93.2	90.4
2.4.6-Tribromophenol	118-79-6	0.5	%	57.7	----	56.3	54.5	56.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	97.0	----	100	97.5	97.6
Anthracene-d10	1719-06-8	0.5	%	100	----	103	100	101
4-Terphenyl-d14	1718-51-0	0.5	%	102	----	105	102	102
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	101	----	101	98.8	102
Toluene-D8	2037-26-5	0.2	%	95.6	----	100	99.6	99.2
4-Bromofluorobenzene	460-00-4	0.2	%	105	----	106	105	105
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	----	85.8	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	98.6	----	108
13C8-PFOA	----	0.0002	%	----	----	102	----	108

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	6.6	12.9	13.8	14.4	11.8
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	13	28	----	29	33
Copper	7440-50-8	5	mg/kg	5	10	----	19	11
Lead	7439-92-1	5	mg/kg	8	14	----	12	12
Nickel	7440-02-0	2	mg/kg	5	12	----	20	18
Zinc	7440-66-6	5	mg/kg	9	14	----	28	13
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
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	<0.05	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
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)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**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
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
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	<0.04	----	----	----
2.4-DB	94-82-6	0.02	mg/kg	----	<0.04	----	----	----
Dicamba	1918-00-9	0.02	mg/kg	----	<0.04	----	----	----
Mecoprop	93-65-2	0.02	mg/kg	----	<0.04	----	----	----
MCPA	94-74-6	0.02	mg/kg	----	<0.04	----	----	----
2.4-DP	120-36-5	0.02	mg/kg	----	<0.04	----	----	----
2.4-D	94-75-7	0.02	mg/kg	----	<0.04	----	----	----
Triclopyr	55335-06-3	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	<0.04	----	----	----
2.4.5-T	93-76-5	0.02	mg/kg	----	<0.04	----	----	----
MCPB	94-81-5	0.02	mg/kg	----	<0.04	----	----	----
Picloram	1918-02-1	0.02	mg/kg	----	<0.04	----	----	----
Clopyralid	1702-17-6	0.02	mg/kg	----	<0.04	----	----	----
Fluroxypyr	69377-81-7	0.02	mg/kg	----	<0.04	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	**0.0004**	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	**0.0004**	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	**0.0004**	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	**0.0004**	----	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**97.6**	----	----	**96.6**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**86.3**	**108**	**108**	----	**113**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**105**	**104**	**100**	----	**85.8**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	**106**	----	----	**115**
Toluene-D8	2037-26-5	0.5	%	----	**104**	----	----	**112**
4-Bromofluorobenzene	460-00-4	0.5	%	----	**97.1**	----	----	**101**
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH14_0.5	BH15_0.1	BH15_0.5	BH15_1.0	BH16_0.1
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-028	ES2020525-031	ES2020525-032	ES2020525-033	ES2020525-035
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	0.5	%	91.8	91.1	----	88.5	82.5
2-Chlorophenol-D4	93951-73-6	0.5	%	95.9	96.6	----	94.9	90.2
2.4.6-Tribromophenol	118-79-6	0.5	%	72.1	81.2	----	77.3	67.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	108	106	----	106	99.6
Anthracene-d10	1719-06-8	0.5	%	106	104	----	105	98.9
4-Terphenyl-d14	1718-51-0	0.5	%	110	108	----	108	102
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	102	102	----	97.9	111
Toluene-D8	2037-26-5	0.2	%	99.8	108	----	100	115
4-Bromofluorobenzene	460-00-4	0.2	%	106	107	----	108	110
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	76.7	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	106	----	----	103
13C8-PFOA	----	0.0002	%	----	110	----	----	109

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	14.5	16.2	3.6	15.6	12.8
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	6	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	32	39	30	45	24
Copper	7440-50-8	5	mg/kg	19	22	<5	25	9
Lead	7439-92-1	5	mg/kg	11	14	7	14	13
Nickel	7440-02-0	2	mg/kg	31	19	4	19	12
Zinc	7440-66-6	5	mg/kg	21	27	6	29	14
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
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	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	<0.5	<0.5
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
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)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ 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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	**0.0003**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	<0.001	----	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	----	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH16_0.5	BH17_2.0	BH18_0.1	BH18_0.5	QA05
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-036	ES2020525-041	ES2020525-042	ES2020525-043	ES2020525-045
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	----	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	<0.0002	----	<0.0002	0.0003
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	<0.0002	----	<0.0002	0.0003
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	<0.0002	----	<0.0002	0.0003
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	110
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	111	134	112	114	130
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	91.3	99.7	98.4	101	96.0
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	----	113	118
Toluene-D8	2037-26-5	0.5	%	----	----	----	111	112
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	----	101	98.8
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	86.2	91.6	89.4	87.7	91.8
2-Chlorophenol-D4	93951-73-6	0.5	%	90.9	95.8	94.0	92.0	95.4
2.4.6-Tribromophenol	118-79-6	0.5	%	70.1	73.0	72.7	71.3	72.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	102	107	103	100	106
Anthracene-d10	1719-06-8	0.5	%	101	104	100	100	105
4-Terphenyl-d14	1718-51-0	0.5	%	105	109	103	105	109
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	98.0	95.0	108	108	114
Toluene-D8	2037-26-5	0.2	%	95.6	93.8	102	116	117
4-Bromofluorobenzene	460-00-4	0.2	%	98.7	102	106	108	108
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	101	----	111	104
13C8-PFOA	----	0.0002	%	----	108	----	108	102

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	0.4	0.4	----	----	----
Moisture Content	----	1.0	%	----	----	----	----	27.5
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	----	7
Cadmium	7440-43-9	1	mg/kg	----	----	----	----	<1
Chromium	7440-47-3	2	mg/kg	----	----	----	----	51
Copper	7440-50-8	5	mg/kg	----	----	----	----	16
Lead	7439-92-1	5	mg/kg	----	----	----	----	11
Nickel	7440-02-0	2	mg/kg	----	----	----	----	15
Zinc	7440-66-6	5	mg/kg	----	----	----	----	26
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	----	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	----	<0.2

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
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
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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Chrysene	218-01-9	0.5	mg/kg	----	----	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	----	<0.5
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	<10	**28**	**44**	<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	<10	**42**	**59**	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	**26**	**38**	<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	<0.2	<0.2	**0.3**	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	**10.5**	**13.6**	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	**1.3**	**1.5**	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	**3.4**	**3.9**	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	**1.2**	**1.3**	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	**16.4**	**20.6**	<0.2

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	**4.6**	**5.2**	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	----	----	<0.0002
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	----	**94.6**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	----	**85.3**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	----	**87.1**
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	----	**90.1**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	TRIP BLANK_03	TRIP BLANK_04	TRIP SPIKE_03	TRIP SPIKE_04	SD01
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-046	ES2020525-047	ES2020525-048	ES2020525-049	ES2020525-052
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	----	70.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	----	101
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	100
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	104
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	113	108	104	97.7	73.1
Toluene-D8	2037-26-5	0.2	%	105	104	96.8	96.8	74.0
4-Bromofluorobenzene	460-00-4	0.2	%	111	108	104	98.6	81.7
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	----	----	116
13C8-PFOA	----	0.0002	%	----	----	----	----	110

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	28.5	28.0	35.3	26.0	19.1
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	7	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	31	16	70	26
Copper	7440-50-8	5	mg/kg	9	13	11	9	9
Lead	7439-92-1	5	mg/kg	8	12	12	11	12
Nickel	7440-02-0	2	mg/kg	6	13	9	7	10
Zinc	7440-66-6	5	mg/kg	16	19	26	16	14
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
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	<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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	<5	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	<5	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	<5	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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	**140**	**130**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	**140**	**130**	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
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	**130**	**140**	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	**110**	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	**240**	**140**	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ 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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
2.4-DB	94-82-6	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Dicamba	1918-00-9	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Mecoprop	93-65-2	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
MCPA	94-74-6	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
2.4-DP	120-36-5	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
2.4-D	94-75-7	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
MCPB	94-81-5	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Picloram	1918-02-1	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	<0.02	<0.04	<0.04	----
EP231A: Perfluoroalkyl Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0207**	<0.0002	**0.0038**	**0.0044**	**0.0032**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	**0.0003**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0218**	<0.0002	**0.0038**	**0.0044**	**0.0032**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0213**	<0.0002	**0.0038**	**0.0044**	**0.0032**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0216**	<0.0002	**0.0038**	**0.0044**	**0.0032**
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**----**	**----**	**94.8**	**100**	**99.5**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**104**	**116**	**99.8**	**116**	**116**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**94.1**	**82.5**	**99.7**	**99.0**	**92.6**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	**83.0**	**75.0**	**92.7**	**80.0**	**----**
Toluene-D8	2037-26-5	0.5	%	**92.7**	**74.4**	**84.5**	**83.2**	**----**
4-Bromofluorobenzene	460-00-4	0.5	%	**92.4**	**81.4**	**82.4**	**85.0**	**----**
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD02	SD03	SD07	SD08	SD11
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-053	ES2020525-054	ES2020525-055	ES2020525-056	ES2020525-057
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	0.5	%	88.2	90.9	89.3	86.8	90.5
2-Chlorophenol-D4	93951-73-6	0.5	%	89.9	92.3	90.0	87.1	91.2
2.4.6-Tribromophenol	118-79-6	0.5	%	80.1	77.8	82.7	80.4	80.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	99.8	104	100	96.7	102
Anthracene-d10	1719-06-8	0.5	%	100	106	102	99.1	105
4-Terphenyl-d14	1718-51-0	0.5	%	102	106	101	102	108
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	87.2	75.3	89.6	84.2	89.7
Toluene-D8	2037-26-5	0.2	%	82.5	77.0	88.2	74.9	81.1
4-Bromofluorobenzene	460-00-4	0.2	%	91.1	76.2	93.4	79.4	83.9
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	85.4	73.6	74.9	71.9	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	101	104	109	108	91.2
13C8-PFOA	----	0.0002	%	116	111	111	112	115

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**19.2**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**7**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**42**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**14**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**16**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**15**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**17**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
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	----	----	----	----
^ 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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
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	----	----	----	----
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	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
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	**24**	**35**	----	----
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	**32**	**44**	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	**18**	**25**	----	----
>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	<0.2	**0.3**	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	**9.0**	**11.9**	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	**1.1**	**1.4**	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	**3.0**	**3.7**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EP080: BTEXN - Continued								
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	**1.1**	**1.3**	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	**14.2**	**18.6**	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	**4.1**	**5.0**	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0009**	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0009**	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0009**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0009**	----	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**96.8**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**129**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD13	TRIP SPIKE CONTROL_03	TRIP SPIKE CONTROL_04	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-058	ES2020525-059	ES2020525-060	--------	--------
				Result	Result	Result	----	----
EP068T: Organophosphorus Pesticide Surrogate - Continued								
DEF	78-48-8	0.05	%	83.6	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	84.4	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	76.7	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	72.7	----	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	97.2	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%	102	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	105	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	90.2	89.0	88.2	----	----
Toluene-D8	2037-26-5	0.2	%	86.4	83.3	84.0	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	88.2	84.6	80.9	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	108	----	----	----	----
13C8-PFOA	----	0.0002	%	114	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	<0.001	**0.002**	**0.004**
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	----	<0.001	<0.001	<0.001	**0.002**
Copper	7440-50-8	0.001	mg/L	----	**0.004**	**0.006**	**0.003**	**0.012**
Lead	7439-92-1	0.001	mg/L	----	<0.001	<0.001	<0.001	**0.003**
Nickel	7440-02-0	0.001	mg/L	----	<0.001	**0.002**	**0.005**	**0.009**
Zinc	7440-66-6	0.005	mg/L	----	**0.008**	<0.005	<0.005	**0.007**
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
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	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
trans-Chlordane	5103-74-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
cis-Chlordane	5103-71-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDE	72-55-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
4.4`-DDD	72-54-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endrin aldehyde	7421-93-4	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
4.4`-DDT	50-29-3	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Endrin ketone	53494-70-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Methoxychlor	72-43-5	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
^ Total Chlordane (sum)	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Demeton-S-methyl	919-86-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Monocrotophos	6923-22-4	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Dimethoate	60-51-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	298-00-0	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Malathion	121-75-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Parathion	56-38-2	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Pirimphos-ethyl	23505-41-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Carbophenothion	786-19-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	----	----	<5	<5	<5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP074D: Fumigants - Continued								
1.2-Dichloropropane	78-87-5	5	µg/L	----	----	<5	<5	<5
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	----	----	<5	<5	<5
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	----	----	<5	<5	<5
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	----	----	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	----	----	<50	<50	<50
Chloromethane	74-87-3	50	µg/L	----	----	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L	----	----	<50	<50	<50
Bromomethane	74-83-9	50	µg/L	----	----	<50	<50	<50
Chloroethane	75-00-3	50	µg/L	----	----	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L	----	----	<50	<50	<50
1.1-Dichloroethene	75-35-4	5	µg/L	----	----	<5	<5	<5
Iodomethane	74-88-4	5	µg/L	----	----	<5	<5	<5
trans-1.2-Dichloroethene	156-60-5	5	µg/L	----	----	<5	<5	<5
1.1-Dichloroethane	75-34-3	5	µg/L	----	----	<5	<5	<5
cis-1.2-Dichloroethene	156-59-2	5	µg/L	----	----	<5	<5	<5
1.1.1-Trichloroethane	71-55-6	5	µg/L	----	----	<5	<5	<5
1.1-Dichloropropylene	563-58-6	5	µg/L	----	----	<5	<5	<5
Carbon Tetrachloride	56-23-5	5	µg/L	----	----	<5	<5	<5
1.2-Dichloroethane	107-06-2	5	µg/L	----	----	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L	----	----	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L	----	----	<5	<5	<5
1.1.2-Trichloroethane	79-00-5	5	µg/L	----	----	<5	<5	<5
1.3-Dichloropropane	142-28-9	5	µg/L	----	----	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L	----	----	<5	<5	<5
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	----	----	<5	<5	<5
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	----	----	<5	<5	<5
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	----	----	<5	<5	<5
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	----	----	<5	<5	<5
1.2.3-Trichloropropane	96-18-4	5	µg/L	----	----	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L	----	----	<5	<5	<5
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	----	----	<5	<5	<5
Hexachlorobutadiene	87-68-3	5	µg/L	----	----	<5	<5	<5
EP074F: Halogenated Aromatic Compounds								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
Chlorobenzene	108-90-7	5	µg/L	----	----	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L	----	----	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L	----	----	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L	----	----	<5	<5	<5
1.3-Dichlorobenzene	541-73-1	5	µg/L	----	----	<5	<5	<5
1.4-Dichlorobenzene	106-46-7	5	µg/L	----	----	<5	<5	<5
1.2-Dichlorobenzene	95-50-1	5	µg/L	----	----	<5	<5	<5
1.2.4-Trichlorobenzene	120-82-1	5	µg/L	----	----	<5	<5	<5
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	----	----	<5	<5	<5
EP074G: Trihalomethanes								
Chloroform	67-66-3	5	µg/L	----	----	<5	<5	<5
Bromodichloromethane	75-27-4	5	µg/L	----	----	<5	<5	<5
Dibromochloromethane	124-48-1	5	µg/L	----	----	<5	<5	<5
Bromoform	75-25-2	5	µg/L	----	----	<5	<5	<5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	20	µg/L	----	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	----	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	----	<100	<100	<100	**140**
C29 - C36 Fraction	----	50	µg/L	----	<50	<50	<50	**130**
^ C10 - C36 Fraction (sum)	----	50	µg/L	----	<50	<50	<50	**270**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	----	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	----	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	----	<100	<100	<100	**260**
>C34 - C40 Fraction	----	100	µg/L	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	----	<100	<100	<100	**260**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	----	<100	<100	<100	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	----	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	----	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	----	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	----	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	----	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	----	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	----	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	----	<5	<5	<5	<5
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	----	----	<10	<10	<10
2.4-DB	94-82-6	10	µg/L	----	----	<10	<10	<10
Dicamba	1918-00-9	10	µg/L	----	----	<10	<10	<10
Mecoprop	93-65-2	10	µg/L	----	----	<10	<10	<10
MCPA	94-74-6	10	µg/L	----	----	<10	<10	<10
2.4-DP	120-36-5	10	µg/L	----	----	<10	<10	<10
2.4-D	94-75-7	10	µg/L	----	----	<10	<10	<10
Triclopyr	55335-06-3	10	µg/L	----	----	<10	<10	<10
Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	----	----	<10	<10	<10
2.4.5-T	93-76-5	10	µg/L	----	----	<10	<10	<10

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
MCPB	94-81-5	10	µg/L	----	----	<10	<10	<10
Picloram	1918-02-1	10	µg/L	----	----	<10	<10	<10
Clopyralid	1702-17-6	10	µg/L	----	----	<10	<10	<10
Fluroxypyr	69377-81-7	10	µg/L	----	----	<10	<10	<10
2.6-D	575-90-6	10	µg/L	----	----	<10	<10	<10
2.4.6-T	575-89-3	10	µg/L	----	----	<10	<10	<10
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	**0.03**	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	**0.003**	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	----	----	**0.24**	**0.02**	**0.02**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	**0.004**	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	**1.03**	**0.03**	**0.05**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	**0.03**	<0.02	**0.02**
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	<0.02	**0.03**
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	**0.01**	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	<0.05	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	----	----	----
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	0.007	----	----	----
Sum of PFAS	----	0.01	µg/L	----	----	1.34	0.05	0.12
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	0.007	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	1.27	0.05	0.07
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	0.007	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	1.34	0.05	0.12
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	1	%	----	----	----	----	80.2
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	----	73.5	84.7	85.4	90.8
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	----	93.2	78.4	70.5	69.0
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	5	%	----	----	85.6	101	105
Toluene-D8	2037-26-5	5	%	----	----	85.2	101	112
4-Bromofluorobenzene	460-00-4	5	%	----	----	82.1	95.1	101
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	----	17.1	19.3	19.4	20.2
2-Chlorophenol-D4	93951-73-6	1.0	%	----	44.4	45.7	45.3	39.5
2.4.6-Tribromophenol	118-79-6	1.0	%	----	44.8	44.8	62.8	73.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	----	58.7	52.3	55.7	61.8
Anthracene-d10	1719-06-8	1.0	%	----	75.1	75.2	77.4	82.6

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	RIN_200611	SW01	SW02	SW03	SW07
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2020525-050	ES2020525-051	ES2020525-061	ES2020525-062	ES2020525-063
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates - Continued								
4-Terphenyl-d14	1718-51-0	1.0	%	----	76.6	75.8	69.9	70.8
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	----	104	77.5	109	113
Toluene-D8	2037-26-5	2	%	----	110	81.1	110	121
4-Bromofluorobenzene	460-00-4	2	%	----	95.9	74.0	96.0	108
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	----	----	103	97.3	106
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	100	----	----	----
13C4-PFOS	----	0.02	%	----	----	110	110	106
13C8-PFOA	----	0.002	%	----	97.4	----	----	----
13C8-PFOA	----	0.02	%	----	----	97.2	94.8	85.3

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L	**0.006**	**0.007**	**0.006**	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L	**0.005**	**0.005**	**0.002**	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
EP066: Polychlorinated Biphenyls (PCB)								
^ Total Polychlorinated biphenyls	----	1	µg/L	<1	<1	<1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	<0.5	----	----
gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	<0.5	----	----
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDT	50-29-3	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Methoxychlor	72-43-5	2.0	µg/L	<2.0	<2.0	<2.0	----	----
^ Total Chlordane (sum)	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Parathion	56-38-2	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	<5	----	----	----	----
1.2-Dichloropropane	78-87-5	5	µg/L	<5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	----	----	----	----
Chloromethane	74-87-3	50	µg/L	<50	----	----	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	----	----	----	----
Bromomethane	74-83-9	50	µg/L	<50	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued								
Chloroethane	75-00-3	50	µg/L	<50	----	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	----	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	<5	----	----	----	----
Iodomethane	74-88-4	5	µg/L	<5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	----	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L	<5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	----	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L	<5	----	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	<5	----	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L	<5	----	----	----	----
Trichloroethene	79-01-6	5	µg/L	<5	----	----	----	----
Dibromomethane	74-95-3	5	µg/L	<5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	----	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L	<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L	<5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	----	----	----	----
Pentachloroethane	76-01-7	5	µg/L	<5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	----	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L	<5	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	<5	----	----	----	----
Bromobenzene	108-86-1	5	µg/L	<5	----	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L	<5	----	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L	<5	----	----	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	5	µg/L	<5	----	----	----	----
Bromodichloromethane	75-27-4	5	µg/L	<5	----	----	----	----
Dibromochloromethane	124-48-1	5	µg/L	<5	----	----	----	----
Bromoform	75-25-2	5	µg/L	<5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	µg/L	**100**	<100	<100	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	**100**	<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	<100	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C16 - C34 Fraction	----	100	µg/L	**110**	<100	<100	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	**110**	<100	<100	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	----	----
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	----	----
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	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	**0.03**	**0.02**	**0.02**	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.05**	**0.05**	**0.04**	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	**0.04**	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	**0.02**	**0.04**	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	**0.04**	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	**0.01**	<0.01	<0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	**0.11**	**0.19**	**0.06**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	**0.08**	**0.07**	**0.06**	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	**0.11**	**0.19**	**0.06**	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	1	%	**76.8**	**85.0**	**71.9**	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	**93.0**	**103**	**93.2**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	**80.0**	**95.4**	**76.7**	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	5	%	**110**	----	----	----	----
Toluene-D8	2037-26-5	5	%	**117**	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%	**105**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	**19.5**	**21.2**	**19.0**	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	**44.8**	**51.4**	**41.5**	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW08	SW11	SW13	----	----
			Client sampling date / time	11-Jun-2020 00:00	11-Jun-2020 00:00	11-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2020525-064	ES2020525-065	ES2020525-066	--------	--------
				Result	Result	Result	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
2.4.6-Tribromophenol	118-79-6	1.0	%	56.9	58.2	47.9	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	56.0	61.2	62.1	----	----
Anthracene-d10	1719-06-8	1.0	%	79.8	86.7	60.2	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	70.2	80.5	69.5	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	118	119	103	----	----
Toluene-D8	2037-26-5	2	%	126	124	103	----	----
4-Bromofluorobenzene	460-00-4	2	%	108	106	91.5	----	----
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	97.7	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.02	%	112	100	105	----	----
13C8-PFOA	----	0.02	%	96.6	109	105	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	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	78	133

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP074S: VOC Surrogates - Continued			
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	64	140
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2020525**	Page	: 1 of 50
Amendment	: **1**		
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 15-Jun-2020
Order number	: ----	Date Analysis Commenced	: 16-Jun-2020
C-O-C number	: ----	Issue Date	: 23-Jun-2020
Sampler	: ALEX TENNANT, DANIEL CONDON		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 66		
No. of samples analysed	: 51		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

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

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

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

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: 3084784)									
ES2020525-004	BH07_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	29	29	0.00	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	18	17	6.32	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	16	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	11	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	24	25	0.00	No Limit
ES2020525-019	BH12_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	37	41	10.4	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	17	17	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	22	22	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	13	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	26	25	4.50	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3084786)									
ES2020525-041	BH17_2.0	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	39	29	29.3	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	19	23	19.4	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	19	10.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	14	12	17.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	27	26	0.00	No Limit
ES2020525-058	SD13	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	42	# 55	28.0	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	15	17	15.5	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: 3084786) - continued									
ES2020525-058	SD13	EG005T: Arsenic	7440-38-2	5	mg/kg	7	8	16.3	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	14	18	21.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	16	21	23.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	17	19	9.61	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3084787)									
ES2020525-006	BH08_0.1	EA055: Moisture Content	----	0.1	%	11.8	11.7	0.00	0% - 50%
ES2020525-025	BH13_0.5	EA055: Moisture Content	----	0.1	%	8.2	8.4	3.56	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3084788)									
ES2020525-043	BH18_0.5	EA055: Moisture Content	----	0.1	%	15.6	13.9	11.6	0% - 50%
ES2020557-002	Anonymous	EA055: Moisture Content	----	0.1	%	12.2	11.6	5.27	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3087906)									
ES2020525-010	BH09_0.5	EA055: Moisture Content	----	0.1	%	15.2	16.0	5.67	0% - 50%
ES2020742-004	Anonymous	EA055: Moisture Content	----	0.1	%	16.8	14.8	13.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3084783)									
ES2020525-004	BH07_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2020525-019	BH12_0.1	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: 3084785)									
ES2020525-041	BH17_2.0	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2020525-058	SD13	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3079223)									
ES2020525-009	BH09_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3081263)									
ES2020525-031	BH15_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3079220)									
ES2020525-019	BH12_0.1	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

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: 3079220) - continued									
ES2020525-019	BH12_0.1	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
ES2020525-009	BH09_0.1	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
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3081260)									
ES2020525-053	SD02	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

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: 3081260) - continued									
ES2020525-053	SD02	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
ES2020525-031	BH15_0.1	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3079220)									
ES2020525-019	BH12_0.1	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

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: 3079220) - continued									
ES2020525-019	BH12_0.1	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
ES2020525-009	BH09_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3081260)									
ES2020525-053	SD02	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

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: 3081260) - continued									
ES2020525-053	SD02	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
ES2020525-031	BH15_0.1	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
EP074D: Fumigants (QC Lot: 3082671)									
ES2020370-001	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
ES2020766-001	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
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3082671)									

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: 3082671) - continued									
ES2020370-001	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
ES2020766-001	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

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: 3082671) - continued									
ES2020766-001	Anonymous	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: 3082671)									
ES2020370-001	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
ES2020766-001	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
EP074G: Trihalomethanes (QC Lot: 3082671)									
ES2020370-001	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: 3082671) - continued									
ES2020766-001	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3079222)									
ES2020525-019	BH12_0.1	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2020525-009	BH09_0.1	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

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: 3079222) - continued									
ES2020525-009	BH09_0.1	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3081262)									
ES2020525-053	SD02	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2020525-031	BH15_0.1	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

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: 3081262) - continued									
ES2020525-031	BH15_0.1	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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3079221)									
ES2020525-019	BH12_0.1	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
ES2020525-009	BH09_0.1	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3081261)									
ES2020525-053	SD02	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
ES2020525-031	BH15_0.1	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3082670)									
ES2020370-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2020766-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3082844)									
EM2010065-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2010113-004	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3083332)									
ES2020525-004	BH07_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2020525-024	BH13_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3083814)									
ES2020542-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2020587-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3090323)									
EW2002829-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3079221)									
ES2020525-019	BH12_0.1	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
ES2020525-009	BH09_0.1	EP071: >C16 - C34 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: 3079221) - continued									
ES2020525-009	BH09_0.1	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3081261)									
ES2020525-053	SD02	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
ES2020525-031	BH15_0.1	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3082670)									
ES2020370-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2020766-001	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: 3082844)									
EM2010065-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2010113-004	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: 3083332)									
ES2020525-004	BH07_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2020525-024	BH13_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3083814)									
ES2020542-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2020587-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3090323)									
EW2002829-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3082670)									
ES2020370-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
ES2020766-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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: 3082844)									

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: 3082844) - continued									
EM2010065-003	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
EM2010113-004	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
EP080: BTEXN (QC Lot: 3083332)									
ES2020525-004	BH07_0.5	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
ES2020525-024	BH13_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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: 3083814)									
ES2020542-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
ES2020587-003	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

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 (%)
EP080: BTEXN (QC Lot: 3083814) - continued									
ES2020587-003	Anonymous	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: 3090323)									
EW2002829-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3079971)									
ES2020331-001	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
ES2020525-031	BH15_0.1	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

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 (%)
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3079971) - continued									
ES2020525-031	BH15_0.1	EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	<0.04	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3081903)									
ES2020525-006	BH08_0.1	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
ES2020525-043	BH18_0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3081903)									
ES2020525-006	BH08_0.1	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
ES2020525-043	BH18_0.5	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3081903)									
ES2020525-006	BH08_0.1	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3081903) - continued									
ES2020525-006	BH08_0.1	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2020525-043	BH18_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3081903)									
ES2020525-006	BH08_0.1	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2020525-043	BH18_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3081903) - continued									
ES2020525-043	BH18_0.5	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3081424)									
ES2020525-051	SW01	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	<0.001	<0.001	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.004	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: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.008	0.008	0.00	No Limit
ES2020585-004	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	<0.001	<0.001	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.008	0.008	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.023	0.022	4.55	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 3081393)									
ES2020519-016	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
EW2002745-001	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	0.002	0.002	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.320	0.321	0.358	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	2.91	2.93	0.990	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.004	0.005	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.057	0.058	0.00	0% - 50%
EG035F: Dissolved Mercury by FIMS (QC Lot: 3081425)									
ES2020525-061	SW02	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
ES2020585-003	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: 3081737)									
ES2020138-001	Anonymous	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	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3081737) - continued									
EW2002753-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EP074D: Fumigants (QC Lot: 3079282)									
ES2020456-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.00	No Limit
ES2020525-064	SW08	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3079282)									
ES2020456-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.00	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	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: 3079282) - continued									
ES2020456-001	Anonymous	EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.00	No Limit
ES2020525-064	SW08	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.00	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3079282)									
ES2020456-001	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.00	No Limit
ES2020525-064	SW08	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	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					
EP074F: Halogenated Aromatic Compounds (QC Lot: 3079282) - continued									
ES2020525-064	SW08	EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3079282)									
ES2020456-001	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.00	No Limit
ES2020525-064	SW08	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3079281)									
ES2020456-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
ES2020525-064	SW08	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3079281)									
ES2020456-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
ES2020525-064	SW08	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 3079281)									
ES2020456-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		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
ES2020525-064	SW08	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: 3079974)									

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 (%)
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3079974) - continued									
ES2020525-061	SW02	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
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3080073)									
ES2019557-029	Anonymous	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.00	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.00	No Limit
ES2020552-001	Anonymous	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.00	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3082633)									
ES2020664-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.043	0.041	4.76	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.011	0.011	0.00	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	0.013	<0.010	26.1	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3080073)									

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 (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3080073) - continued									
ES2019557-029	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.00	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.00	No Limit
ES2020552-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.00	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3082633)									
ES2020664-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.146	0.148	1.36	0% - 50%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.031	0.031	0.00	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.025	<0.025	0.00	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.025	0.027	7.69	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	2.94	2.84	3.50	0% - 20%
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3080073)									
ES2019557-029	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3080073) - continued									
ES2019557-029	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
ES2020552-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3082633)									
ES2020664-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.025	<0.025	0.00	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.025	<0.025	0.00	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.025	<0.025	0.00	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.025	<0.025	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3080073)									

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 (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3080073) - continued									
ES2019557-029	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.00	No Limit
ES2020552-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3082633)									
ES2020664-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.010	<0.010	0.00	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.010	<0.010	0.00	No Limit
EP231P: PFAS Sums (QC Lot: 3080073)									
ES2019557-029	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.00	No Limit
ES2020552-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	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: 3084784)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	130	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	117	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	129	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	124	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	128	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	126	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	112	70.0	130
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3084786)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	123	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	116	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	129	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	127	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	120	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	121	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	109	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3084783)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	94.9	70.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3084785)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	74.4	70.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3079223)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	89.9	62.0	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3081263)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	99.6	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3079220)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	99.8	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	102	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	63.0	117

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: 3079220) - continued								
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	104	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	108	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	93.6	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	106	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	86.1	54.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3081260)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.2	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.9	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.2	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.7	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	105	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	91.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	82.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3079220)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	101	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	67.0	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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3079220) - continued								
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	103	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	108	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	100	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.3	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	107	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	109	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	103	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	108	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	76.7	41.0	123
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3081260)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	82.5	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.7	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	77.9	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	75.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.8	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	77.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.8	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	76.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.0	41.0	123
EP074D: Fumigants (QCLot: 3082671)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	105	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	96.5	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	105	51.0	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
EP074D: Fumigants (QCLot: 3082671) - continued								
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	99.9	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	100	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3082671)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	94.4	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	102	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	95.5	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	99.1	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	96.3	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	97.5	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	102	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	85.2	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	108	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	79.4	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	95.5	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	96.4	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	99.5	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	86.8	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	98.9	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	102	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	115	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	104	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	111	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	97.5	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	102	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	99.3	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	123	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	114	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	99.7	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	91.6	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	110	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	91.7	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 3082671)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	99.8	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	99.7	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	97.5	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	96.5	70.0	114

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
EP074F: Halogenated Aromatic Compounds (QCLot: 3082671) - continued								
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	99.0	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	99.7	52.0	122
EP074G: Trihalomethanes (QCLot: 3082671)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	105	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	105	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	98.2	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	102	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3079222)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	102	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	107	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	97.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	100.0	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	98.7	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	96.1	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	99.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	95.5	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	94.9	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3081262)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	95.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	96.0	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	92.4	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	96.3	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	96.0	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	94.2	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	98.5	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	97.1	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	88.2	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	88.8	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	87.8	68.0	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3081262) - continued								
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	90.4	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	89.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	86.1	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	83.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	87.2	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3079221)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	99.8	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	93.4	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3081261)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	99.1	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	91.6	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082670)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	77.9	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082844)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	83.2	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3083332)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	106	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3083814)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.3	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090323)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	94.1	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3079221)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	99.0	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	99.4	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	75.7	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3081261)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	98.7	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.1	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	79.4	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082670)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	78.8	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082844)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	86.7	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3083332)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	108	68.4	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3083814)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	81.2	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090323)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	94.2	68.4	128
EP080: BTEXN (QCLot: 3082670)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	83.6	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	92.5	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	87.1	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	92.4	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	91.7	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	91.0	63.0	119
EP080: BTEXN (QCLot: 3082844)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	85.2	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	90.0	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	91.1	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	96.3	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	95.0	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	91.7	61.2	123
EP080: BTEXN (QCLot: 3083332)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	107	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	106	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	106	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	106	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	108	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	80.1	63.0	119
EP080: BTEXN (QCLot: 3083814)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	79.4	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	83.0	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	82.5	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	86.3	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	85.9	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.5	63.0	119
EP080: BTEXN (QCLot: 3090323)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	105	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	101	67.0	121

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: 3090323) - continued								
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	99.5	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	100	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.6	63.0	119
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079971)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	73.8	54.4	128
EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	73.2	45.5	130
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	72.7	51.7	135
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	87.2	60.0	130
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	74.9	56.8	131
EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	75.1	50.0	141
EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	78.7	68.5	131
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	83.1	50.8	141
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	72.4	40.8	126
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	82.1	57.4	139
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	76.8	38.9	137
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	80.6	48.7	129
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	79.1	49.4	106
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	75.0	53.2	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3081903)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.4	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3081903)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	89.4	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.4	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.6	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	66.0	139

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3081903) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3081903)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	95.4	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.0	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.2	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.6	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3081903)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	101	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	98.8	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	93.6	69.2	143

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3081424)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	89.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	86.2	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	85.6	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	84.3	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	84.9	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	84.2	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	83.6	81.0	117
EG020T: Total Metals by ICP-MS (QCLot: 3081393)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	87.9	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	90.1	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	87.5	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	84.4	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	90.6	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.6	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	85.1	79.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3081425)								

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
EG035F: Dissolved Mercury by FIMS (QCLot: 3081425) - continued								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.3	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3081737)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	94.8	77.0	111
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3079265)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	96.0	68.9	113
EP068A: Organochlorine Pesticides (OC) (QCLot: 3079264)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	84.1	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	82.6	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	95.8	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	95.6	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	98.2	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	99.8	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	103	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	103	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	99.4	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	80.1	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	77.8	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	101	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	84.6	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	101	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	99.3	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	103	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	88.7	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	100	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	102	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	99.8	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	83.0	61.1	114
EP068A: Organochlorine Pesticides (OC) (QCLot: 3080736)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	80.5	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	81.3	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	81.5	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	82.5	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	88.9	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	80.2	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	87.8	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	84.5	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	83.8	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	76.5	66.7	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
EP068A: Organochlorine Pesticides (OC) (QCLot: 3080736) - continued								
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	79.0	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	80.3	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	86.7	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	80.8	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	81.5	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	78.7	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	85.0	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	79.9	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	77.9	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	80.1	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	81.3	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3079264)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	96.1	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	82.2	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	21.4	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	83.8	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	91.0	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	99.2	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	81.8	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	88.8	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	91.6	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	99.2	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	85.6	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	88.5	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	94.8	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	86.2	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	88.5	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	83.1	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	95.8	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	108	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	106	51.6	128
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3080736)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	79.9	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	89.8	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	22.3	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	86.2	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	79.8	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	85.4	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	82.3	70.0	124

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: 3080736) - continued								
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	87.9	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	84.0	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	81.4	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	82.3	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	83.9	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	90.7	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	85.5	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	92.2	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	79.4	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	81.5	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	79.6	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	88.1	51.6	128
EP074D: Fumigants (QCLot: 3079282)								
EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	102	68.0	122
EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	96.7	76.0	118
EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	98.5	62.0	120
EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	98.6	60.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	97.4	69.0	117
EP074E: Halogenated Aliphatic Compounds (QCLot: 3079282)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	101	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	104	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	102	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	105	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	103	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	101	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	101	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	94.5	70.2	128
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	105	74.0	118
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	103	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	98.2	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	99.1	67.0	119
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	101	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	94.5	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	106	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	105	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	98.0	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	103	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	99.2	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	100	72.0	124

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
EP074E: Halogenated Aliphatic Compounds (QCLot: 3079282) - continued								
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	93.8	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	107	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	96.0	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	96.2	70.0	124
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	108	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	102	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	95.1	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	110	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3079282)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	100	79.0	117
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	104	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	103	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	105	73.0	119
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	102	75.0	117
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	102	74.0	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	107	75.0	117
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	102	61.0	125
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	96.2	67.0	123
EP074G: Trihalomethanes (QCLot: 3079282)								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	99.9	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	98.2	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	91.6	65.0	115
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	97.1	73.5	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3079263)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	71.3	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	85.6	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	81.3	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	75.4	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	76.6	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	71.1	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	86.4	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	85.1	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	71.2	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	81.8	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	92.7	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	99.0	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	78.4	63.3	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3079263) - continued								
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	71.5	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	70.5	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	74.0	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3079262)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	72.5	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	86.6	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	79.6	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3079281)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	79.3	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3079262)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	92.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	93.8	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	105	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3079281)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	83.7	75.0	127
EP080: BTEXN (QCLot: 3079281)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	90.3	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	90.0	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	93.0	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	94.5	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	94.5	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	86.2	70.0	120
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079974)								
EP202-SL: 4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	100 µg/L	112	82.0	136
EP202-SL: 2.4-DB	94-82-6	10	µg/L	<10	100 µg/L	97.9	65.0	147
EP202-SL: Dicamba	1918-00-9	10	µg/L	<10	100 µg/L	116	83.0	137
EP202-SL: Mecoprop	93-65-2	10	µg/L	<10	100 µg/L	119	75.0	143
EP202-SL: MCPA	94-74-6	10	µg/L	<10	100 µg/L	109	76.0	140
EP202-SL: 2.4-DP	120-36-5	10	µg/L	<10	100 µg/L	104	76.0	144
EP202-SL: 2.4-D	94-75-7	10	µg/L	<10	100 µg/L	100	77.0	139
EP202-SL: Triclopyr	55335-06-3	10	µg/L	<10	100 µg/L	116	77.0	141
EP202-SL: Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	100 µg/L	108	75.0	143
EP202-SL: 2.4.5-T	93-76-5	10	µg/L	<10	100 µg/L	100	78.0	140
EP202-SL: MCPB	94-81-5	10	µg/L	<10	100 µg/L	104	69.2	139
EP202-SL: Picloram	1918-02-1	10	µg/L	<10	100 µg/L	115	70.0	144
EP202-SL: Clopyralid	1702-17-6	10	µg/L	<10	100 µg/L	116	70.0	145
EP202-SL: Fluroxypyr	69377-81-7	10	µg/L	<10	100 µg/L	102	77.0	145

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
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3080073)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	119	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	125	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	0.25 µg/L	120	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	113	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	122	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	105	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3082633)								
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	91.6	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	94.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	90.4	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	90.0	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	103	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3080073)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	109	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	124	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	125	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	124	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	125	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	117	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	127	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	117	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	118	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	115	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.8	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3082633)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	104	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	106	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	95.2	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	104	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	109	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	124	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	106	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	111	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	106	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133

Sub-Matrix: **WATER**

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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3080073)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	120	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	121	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	101	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	123	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	121	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	122	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	118	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3082633)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	104	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	96.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	109	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	99.5	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	103	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	124	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	100	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3080073)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	106	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	121	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	122	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	121	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3082633)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	120	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	109	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	101	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	116	75.2	137

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	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3084784)							
ES2020525-004	BH07_0.5	EG005T: Arsenic	7440-38-2	50 mg/kg	88.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.8	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	108	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	85.8	70.0	130
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3084786)							
ES2020525-041	BH17_2.0	EG005T: Arsenic	7440-38-2	50 mg/kg	83.0	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	91.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	90.8	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	91.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	92.6	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	89.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3084783)							
ES2020525-004	BH07_0.5	EG035T: Mercury	7439-97-6	5 mg/kg	70.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3084785)							
ES2020525-041	BH17_2.0	EG035T: Mercury	7439-97-6	5 mg/kg	88.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3079223)							
ES2020525-009	BH09_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	107	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3081263)							
ES2020525-031	BH15_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	107	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3079220)							
ES2020525-009	BH09_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	106	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	106	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	111	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	109	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	97.1	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	89.4	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3081260)							
ES2020525-031	BH15_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	75.3	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	111	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	92.3	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	86.6	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	85.1	70.0	130

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
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3079220)							
ES2020525-009	BH09_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	90.9	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	116	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	103	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	102	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	73.9	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3081260)							
ES2020525-031	BH15_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	76.7	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	88.4	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	82.3	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	105	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	80.9	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3082671)							
ES2020766-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	111	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	97.7	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3082671)							
ES2020766-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	105	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3079222)							
ES2020525-009	BH09_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.1	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	86.3	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3081262)							
ES2020525-031	BH15_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	88.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	84.1	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3079221)							
ES2020525-009	BH09_0.1	EP071: C10 - C14 Fraction	----	523 mg/kg	109	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	115	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	121	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3081261)							
ES2020525-031	BH15_0.1	EP071: C10 - C14 Fraction	----	523 mg/kg	114	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	116	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	121	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082670)							
ES2020766-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	76.7	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3082844)							
EM2010065-004	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	71.0	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3083332)							
ES2020525-004	BH07_0.5						

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: 3083332) - continued							
ES2020525-004	BH07_0.5	EP080: C6 - C9 Fraction	----	32.5 mg/kg	102	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3083814)							
ES2020542-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.6	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090323)							
EW2002829-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	100	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3079221)							
ES2020525-009	BH09_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	112	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	119	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	110	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3081261)							
ES2020525-031	BH15_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	120	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	110	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082670)							
ES2020766-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	77.3	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3082844)							
EM2010065-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	65.7	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3083332)							
ES2020525-004	BH07_0.5	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3083814)							
ES2020542-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	96.9	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090323)							
EW2002829-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	96.7	70.0	130
EP080: BTEXN (QCLot: 3082670)							
ES2020766-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	92.6	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	89.1	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	94.9	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	91.1	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	90.3	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	84.4	70.0	130
EP080: BTEXN (QCLot: 3082844)							
EM2010065-004	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	94.6	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	92.9	56.0	139
EP080: BTEXN (QCLot: 3083332)							

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: BTEXN (QCLot: 3083332) - continued							
ES2020525-004	BH07_0.5	EP080: Benzene	71-43-2	2.5 mg/kg	91.5	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	90.6	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	97.5	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	95.9	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	97.7	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	87.0	70.0	130
EP080: BTEXN (QCLot: 3083814)							
ES2020542-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	82.7	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	90.5	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	92.6	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	95.5	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	88.1	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	94.1	70.0	130
EP080: BTEXN (QCLot: 3090323)							
EW2002829-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	100	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	93.4	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	92.8	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	90.2	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	91.3	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	71.2	70.0	130
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079971)							
ES2020331-001	Anonymous	EP202: Mecoprop	93-65-2	0.1 mg/kg	79.5	60.0	140
		EP202: MCPA	94-74-6	0.1 mg/kg	65.3	57.0	143
		EP202: 2.4-D	94-75-7	0.1 mg/kg	85.9	68.0	139
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	62.7	51.0	145
		EP202: 2.4.5-T	93-76-5	0.1 mg/kg	94.7	57.0	142
		EP202: Picloram	1918-02-1	0.1 mg/kg	59.5	49.0	138
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	63.8	49.0	149
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3081903)							
ES2020525-006	BH08_0.1	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	78.0	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	94.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	83.6	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	88.8	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	88.0	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	92.0	59.0	134

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3081903)							
ES2020525-006	BH08_0.1	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	102	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	95.6	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	105	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	104	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	104	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	116	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	99.6	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	100	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	109	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3081903)							
ES2020525-006	BH08_0.1	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	98.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	98.2	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	112	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	89.1	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	102	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	112	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	99.6	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3081903)							
ES2020525-006	BH08_0.1	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	122	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	94.4	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	107	69.2	143

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3081424)							
ES2020525-061	SW02	EG020A-F: Arsenic	7440-38-2	1 mg/L	85.4	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	87.7	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	90.7	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	99.6	70.0	130

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3081424) - continued							
ES2020525-061	SW02	EG020A-F: Nickel	7440-02-0	1 mg/L	84.2	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	86.6	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 3081393)							
ES2020525-050	RIN_200611	EG020A-T: Arsenic	7440-38-2	1 mg/L	84.1	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	88.8	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	88.0	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	83.3	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	100	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	81.0	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	84.3	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3081425)							
ES2020525-051	SW01	EG035F: Mercury	7439-97-6	0.01 mg/L	84.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3081737)							
ES2020475-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	74.5	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3079282)							
ES2020456-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	25 µg/L	82.1	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	97.6	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3079282)							
ES2020456-001	Anonymous	EP074: Chlorobenzene	108-90-7	25 µg/L	111	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3079281)							
ES2020456-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	94.1	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3079281)							
ES2020456-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	94.3	70.0	130
EP080: BTEXN (QCLot: 3079281)							
ES2020456-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	93.3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	90.7	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	95.7	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	94.2	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	95.1	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	76.2	70.0	130
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079974)							
ES2020525-061	SW02	EP202-SL: Mecoprop	93-65-2	100 µg/L	106	75.0	143
		EP202-SL: MCPA	94-74-6	100 µg/L	116	76.0	140
		EP202-SL: 2.4-D	94-75-7	100 µg/L	116	77.0	139
		EP202-SL: Triclopyr	55335-06-3	100 µg/L	115	77.0	141

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
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3079974) - continued							
ES2020525-061	SW02	EP202-SL: 2.4.5-T	93-76-5	100 µg/L	109	78.0	140
		EP202-SL: Picloram	1918-02-1	100 µg/L	107	70.0	144
		EP202-SL: Clopyralid	1702-17-6	100 µg/L	120	70.0	145
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3080073)							
ES2019557-030	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	123	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	127	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	120	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	123	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	124	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	119	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3082633)							
ES2020664-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	86.8	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	92.8	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	88.8	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	99.6	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.8	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	90.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3080073)							
ES2019557-030	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	111	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	121	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	126	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	121	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	124	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	119	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	118	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	119	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	118	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	111	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	96.2	71.0	132
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3082633)							
ES2020664-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	85.8	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	105	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	100	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	100	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	102	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	110	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	102	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	110	69.0	133

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3082633) - continued							
ES2020664-002	Anonymous	EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	114	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	110	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	97.6	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	94.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3080073)							
ES2019557-030	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	126	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	120	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	83.1	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	128	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	127	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	120	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3082633)							
ES2020664-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	101	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	109	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	114	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	109	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	116	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	103	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3080073)							
ES2019557-030	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	118	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	115	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	111	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	111	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3082633)							
ES2020664-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	117	63.0	143

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3082633) - continued							
ES2020664-002	Anonymous	EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	116	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	93.6	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	107	75.2	137

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2020525**	Page	: 1 of 22
Amendment	: **1**		
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 15-Jun-2020
Site	: ----	Issue Date	: 23-Jun-2020
Sampler	: ALEX TENNANT, DANIEL CONDON	No. of samples received	: 66
Order number	: ----	No. of samples analysed	: 51

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 Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **Duplicate 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
Duplicate (DUP) RPDs							
EG005(ED093)T: Total Metals by ICP-AES	ES2020525--058	SD13	**Chromium**	7440-47-3	28.0 %	0% - 20%	**RPD exceeds LOR based limits**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	11	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	5	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	11	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	0	5	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**----**	----	----	**17-Jun-2020**	25-Jun-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								
Soil Glass Jar - Unpreserved (EA055)								
BH07_0.1,	BH08_0.5,	**11-Jun-2020**	**----**	----	----	**18-Jun-2020**	25-Jun-2020	✓
BH09_0.5,	BH10_0.5,							
BH12_1.0,	BH15_0.5,							
TRIP BLANK_03,	TRIP BLANK_04							
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-Dec-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								

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)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	09-Jul-2020	✓	**19-Jun-2020**	09-Jul-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
BH09_0.1,	BH10_0.1,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
BH12_0.1,	BH12_1.0,							
BH15_0.1,	BH16_0.1,							
QA05,	SD07,							
SD08,	SD11,							
SD13								

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)								
BH07_0.1,	BH07_0.5,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
BH08_0.1,	BH08_0.5,							
BH09_0.1,	BH09_0.5,							
BH10_0.1,	BH10_0.5,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_0.5,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
BH07_0.1,	BH07_0.5,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
BH08_0.1,	BH08_0.5,							
BH09_0.1,	BH09_0.5,							
BH10_0.1,	BH10_0.5,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_0.5,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								

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
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
BH08_0.1, BH12_0.1, BH15_0.1, BH16_0.1, BH18_0.5, QA05, SD02, SD03, SD07, SD08	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**17-Jun-2020**	18-Jun-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
BH08_0.1, BH12_0.1, BH15_0.1, BH16_0.1, BH18_0.5, QA05, SD02, SD03, SD07, SD08	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**17-Jun-2020**	18-Jun-2020	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
BH08_0.1, BH12_0.1, BH15_0.1, BH16_0.1, BH18_0.5, QA05, SD02, SD03, SD07, SD08	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**17-Jun-2020**	18-Jun-2020	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
BH08_0.1, BH12_0.1, BH15_0.1, BH16_0.1, BH18_0.5, QA05, SD02, SD03, SD07, SD08	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**17-Jun-2020**	18-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)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	27-Jul-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13								

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)								
BH08_0.1,	BH12_0.1,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**17-Jun-2020**	25-Jun-2020	✓
BH15_0.1,	BH16_0.1,							
BH18_0.5,	QA05,							
SD02,	SD03,							
SD07,	SD08							
Soil Glass Jar - Unpreserved (EP080)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	25-Jun-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13,	TRIP SPIKE CONTROL_03,							
TRIP SPIKE CONTROL_04								
Soil Glass Jar - Unpreserved (EP080)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
BH08_1.0,	BH09_0.1,							
BH09_2.0,	BH10_0.1,							
BH10_2.8,	BH11_0.1,							
BH11_0.5,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_1.0,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
TRIP BLANK_03,	TRIP BLANK_04,							
SD01,	SD11,							
SD13								
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_03,	TRIP SPIKE_04	**11-Jun-2020**	**19-Jun-2020**	25-Jun-2020	✓	**19-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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)								
BH08_0.1,	BH12_0.1,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**17-Jun-2020**	25-Jun-2020	✓
BH15_0.1,	BH16_0.1,							
BH18_0.5,	QA05,							
SD02,	SD03,							
SD07,	SD08							
Soil Glass Jar - Unpreserved (EP080)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	25-Jun-2020	✓
BH08_0.1,	BH08_1.0,							
BH09_0.1,	BH09_2.0,							
BH10_0.1,	BH10_2.8,							
BH11_0.1,	BH11_0.5,							
BH12_0.1,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_0.1,	BH15_1.0,							
BH16_0.1,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
BH18_0.5,	QA05,							
SD01,	SD02,							
SD03,	SD07,							
SD08,	SD11,							
SD13,	TRIP SPIKE CONTROL_03,							
TRIP SPIKE CONTROL_04								
Soil Glass Jar - Unpreserved (EP080)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
BH08_1.0,	BH09_0.1,							
BH09_2.0,	BH10_0.1,							
BH10_2.8,	BH11_0.1,							
BH11_0.5,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_1.0,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
TRIP BLANK_03,	TRIP BLANK_04,							
SD01,	SD11,							
SD13								
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_03,	TRIP SPIKE_04	**11-Jun-2020**	**19-Jun-2020**	25-Jun-2020	✓	**19-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
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
BH08_0.1,	BH12_0.1,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**17-Jun-2020**	25-Jun-2020	✓
BH15_0.1,	BH16_0.1,							
BH18_0.5,	QA05,							
SD02,	SD03,							
SD07,	SD08							
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE CONTROL_03,	TRIP SPIKE CONTROL_04	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**18-Jun-2020**	25-Jun-2020	✓
Soil Glass Jar - Unpreserved (EP080)								
BH07_0.5,	BH07_2.0,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
BH08_1.0,	BH09_0.1,							
BH09_2.0,	BH10_0.1,							
BH10_2.8,	BH11_0.1,							
BH11_0.5,	BH12_0.5,							
BH13_0.1,	BH13_0.5,							
BH14_0.1,	BH14_0.5,							
BH15_1.0,	BH16_0.5,							
BH17_2.0,	BH18_0.1,							
TRIP BLANK_03,	TRIP BLANK_04,							
SD01,	SD11,							
SD13								
Soil Glass Jar - Unpreserved (EP080)								
TRIP SPIKE_03,	TRIP SPIKE_04	**11-Jun-2020**	**19-Jun-2020**	25-Jun-2020	✓	**19-Jun-2020**	25-Jun-2020	✓
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
Soil Glass Jar - Unpreserved (EP202)								
BH08_0.1,	BH11_0.1,	**11-Jun-2020**	**17-Jun-2020**	25-Jun-2020	✓	**17-Jun-2020**	27-Jul-2020	✓
BH12_0.1,	BH13_0.1,							
BH15_0.1,	SD02,							
SD03,	SD07,							
SD08								
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X)								
BH07_0.1,	BH08_0.1,	**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH09_0.5,	BH10_0.1,							
BH11_0.1,	BH12_0.1,							
BH13_0.1,	BH14_0.1,							
BH15_0.1,	BH16_0.1,							
BH17_2.0,	BH18_0.5,							
QA05,	SD01,							
SD02,	SD03,							
SD07,	SD08,							
SD11,	SD13							

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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
BH07_0.1, BH08_0.1, BH09_0.5, BH10_0.1, BH11_0.1, BH12_0.1, BH13_0.1, BH14_0.1, BH15_0.1, BH16_0.1, BH17_2.0, BH18_0.5, QA05, SD01, SD02, SD03, SD07, SD08, SD11, SD13	**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
BH07_0.1, BH08_0.1, BH09_0.5, BH10_0.1, BH11_0.1, BH12_0.1, BH13_0.1, BH14_0.1, BH15_0.1, BH16_0.1, BH17_2.0, BH18_0.5, QA05, SD01, SD02, SD03, SD07, SD08, SD11, SD13	**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
BH07_0.1, BH08_0.1, BH09_0.5, BH10_0.1, BH11_0.1, BH12_0.1, BH13_0.1, BH14_0.1, BH15_0.1, BH16_0.1, BH17_2.0, BH18_0.5, QA05, SD01, SD02, SD03, SD07, SD08, SD11, SD13	**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	26-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
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X)								
BH07_0.1,	BH08_0.1,	**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	26-Jul-2020	✓
BH09_0.5,	BH10_0.1,							
BH11_0.1,	BH12_0.1,							
BH13_0.1,	BH14_0.1,							
BH15_0.1,	BH16_0.1,							
BH17_2.0,	BH18_0.5,							
QA05,	SD01,							
SD02,	SD03,							
SD07,	SD08,							
SD11,	SD13							

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
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SW01,	SW02,	**11-Jun-2020**	**----**	----	----	**16-Jun-2020**	08-Dec-2020	✓
SW03,	SW07,							
SW08,	SW11,							
SW13								
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
RIN_200611		**11-Jun-2020**	**16-Jun-2020**	08-Dec-2020	✓	**16-Jun-2020**	08-Dec-2020	✓
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SW01,	SW02,	**11-Jun-2020**	**----**	----	----	**17-Jun-2020**	09-Jul-2020	✓
SW03,	SW07,							
SW08,	SW11,							
SW13								
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
RIN_200611		**11-Jun-2020**	**----**	----	----	**17-Jun-2020**	09-Jul-2020	✓
EP066: Polychlorinated Biphenyls (PCB)								
Amber Glass Bottle - Unpreserved (EP066)								
SW07,	SW08,	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-Jul-2020	✓
SW11,	SW13							

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
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068) SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-Jul-2020	✓
Amber Glass Bottle - Unpreserved (EP068) SW01	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	27-Jul-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068) SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-Jul-2020	✓
Amber Glass Bottle - Unpreserved (EP068) SW01	**11-Jun-2020**	**17-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	27-Jul-2020	✓
EP074D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP074) SW02, SW03, SW07, SW08	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) SW02, SW03, SW07, SW08	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP074F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) SW02, SW03, SW07, SW08	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP074G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP074) SW02, SW03, SW07, SW08	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-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
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-Jul-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	18-Jun-2020	✓	**19-Jun-2020**	26-Jul-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) SW01, SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**16-Jun-2020**	25-Jun-2020	✓	**16-Jun-2020**	25-Jun-2020	✓
EP202A: Phenoxyacetic Acid Herbicides by LCMS							
Amber Glass Bottle - Unpreserved (EP202-SL) SW02, SW03, SW07, SW08	**11-Jun-2020**	**----**	----	----	**16-Jun-2020**	18-Jun-2020	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) SW01	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	08-Dec-2020	✓
HDPE (no PTFE) (EP231X) SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-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
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL)							
SW01	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	08-Dec-2020	✓
HDPE (no PTFE) (EP231X)							
SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-Dec-2020	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL)							
SW01	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	08-Dec-2020	✓
HDPE (no PTFE) (EP231X)							
SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-Dec-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL)							
SW01	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	08-Dec-2020	✓
HDPE (no PTFE) (EP231X)							
SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-Dec-2020	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL)							
SW01	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**17-Jun-2020**	08-Dec-2020	✓
HDPE (no PTFE) (EP231X)							
SW02, SW03, SW07, SW08, SW11, SW13	**11-Jun-2020**	**17-Jun-2020**	08-Dec-2020	✓	**18-Jun-2020**	08-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: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	6	60	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	31	12.90	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	4	31	12.90	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	32	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	31	12.90	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	7	58	12.07	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	18.18	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	58	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	18.18	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	32	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	58	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	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*	
Matrix Spikes (MS) - Continued							
Pesticides by GCMS	EP068	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	**18.18**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	32	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	58	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	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*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	11	**0.00**	**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	5	**0.00**	**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	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	11	**18.18**	**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	5	**20.00**	**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	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	12	**8.33**	**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)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	11	**18.18**	**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	5	**20.00**	**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	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	11	**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	5	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	12	**8.33**	**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
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).
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)
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)
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.
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.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
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 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)
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)
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)
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.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is concentrated, combined with an equal volume of reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
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.
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.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.
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)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 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.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: EMM Consulting	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: 20 Chandos St, St Leonards NSW			Custody Seal Intact? Yes No N/A
PROJECT: Brunslea Park DSI — PROJECT NO.: J200300	ALS QUOTE NO.: ME/359/20	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: — PURCHASE ORDER NO.:	COUNTRY OF ORIGIN: Australia	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 2-7 °C
PROJECT MANAGER: Daniel Condon	CONTACT PH: 0439885614	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: Lachlan Lewis	SAMPLER MOBILE: 0401 638 848		
COC Emailed to ALS? (YES / NO)	EDD FORMAT (or default):		
Email Reports to: dcondon@emmconsulting.com.au, llewis@emmconsulting.com.au, emmconsulting@esdat.net			
Email Invoice to: dcondon@emmconsulting.com.au			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
L Lewis	Sep M.		SOSMAS
DATE/TIME: 18/6/20 1300	DATE/TIME: 18/06/2020 1410	DATE/TIME:	DATE/TIME: 18/6/20 1845

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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos A/P	PFAS - Full Suite	PCBs	OC/OP Pesticides	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons	Phenoxyacid herbicides	PFAS - short suite	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc. TRH/BTEXN
1	SS01_200617	17/6/20	S			X								
2	SS02_200617					X								
3	SS03_200617					X								
4	SD12_200617						X		X	X				
5	SD10_200617					X								
6	SD09_200617													
7	SW12_200617		W				X			X				
8	SW09_200617						X			X				
9	MW01_200617						X	X	X	X	X	X		
10	QC302_200617									X			X	
11	TB03_200617													X
12	TS03_200617		W											X
	TS03				TOTAL									

Subcon / Forward Lab / Split WO
Lab / Analysis: Newcastle / Asbestos
Organised By / Date:
Relinquished By / Date:
Connote / Courier:
WO No:
Attached By PO / Internal Sheet:

Environmental Division Sydney
Work Order Reference
ES2021234

Telephone : + 61-2-8784 8555

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: EMM Consulting	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: 20 Chandos St, St Leonards NSW			Custody Seal Intact? Yes No N/A
PROJECT: Brunslea Park DSI PROJECT NO.: J200300	ALS QUOTE NO.: ME/359/20	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: PURCHASE ORDER NO.:	COUNTRY OF ORIGIN: Australia	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Daniel Condon	CONTACT PH: 0439885614	OF: 1 2 3 4 5 6 7	Other comment: 27
SAMPLER: Lachlan Lewis	SAMPLER MOBILE: 0401 638 848		
COC Emailed to ALS? (YES / NO)	EDD FORMAT (or default):		
Email Reports to: dcondon@emmconsulting.com.au, llewis@emmconsulting.com.au, emmconsulting@esdat.net			
Email Invoice to: dcondon@emmconsulting.com.au			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
L Lewis	Sep M.		Sofia Ho ALS
DATE/TIME: 18/6/20 1200	DATE/TIME: 18/6/2020 1410	DATE/TIME:	DATE/TIME: 18/6/20 1845

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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos A/P	PFAS - Full Suite	PCBs	OC/OP Pesticides + herbicides Phenoxy acid	8 Metals/TRH/BTEXN [redacted]	Chlorinated hydrocarbons	PAH [redacted]		Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
13	SD14_200616	16/6/20	S						X	X		X		
14	SD06_200616													
15	SD05_200616					X								
16	SD04_200616													
17	QC101_200616			QC100_200616 received			X			X				
18	MW02B_200616		W				X			X				
19	MW03A_200616								X	X		X		
20	MW03B_200616							X	X	X	X	X		
21	MW04_200616								X	X		[redacted]		
22	QC103_200616									X				
23	SW14_200616						X		X	X		X		
24	SW06_200616						X		X	X		X		
					TOTAL									

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: EMM Consulting	TURNAROUND REQUIREMENTS : ☑ Standard TAT (List due date):
OFFICE: 20 Chandos St, St Leonards NSW	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):
PROJECT: Brunslea Park DSI — PROJECT NO.: J200300	ALS QUOTE NO.: ME/359/20
ORDER NUMBER: — PURCHASE ORDER NO.:	COUNTRY OF ORIGIN: Australia
PROJECT MANAGER: Daniel Condon	CONTACT PH: 0439885614
SAMPLER: Lachlan Lewis	SAMPLER MOBILE: 0401 638 848
COC Emailed to ALS? (YES / NO)	EDD FORMAT (or default):
Email Reports to: dcondon@emmconsulting.com.au, llewis@emmconsulting.com.au, emmconsulting@esdat.net	
Email Invoice to: dcondon@emmconsulting.com.au	

COC SEQUENCE NUMBER (Circle)

COC:	1	2	3	4	5	6	7
CF:	1	2	3	4	5	6	7

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:	27		

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
L Lewis	Sep M.		[illegible]
DATE/TIME: 18/6/20 1200	DATE/TIME: 18/06/2020 1410	DATE/TIME:	DATE/TIME: 18/6/20 1845

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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos A/P	PFAS - Full Suite	PCBs	OC/OP Pesticides	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons	Phenoxyacid herbicides	PFAS - short suite	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc. TRH/BTEXN
25	SW05_200616	16/6/20	W				X			X				
26	SW04_200616						X			X				
27	QC100_200616									X			X	
28	QC301_200616									X			X	
29	TB02_200616													X
30	TS02_200616			Trip Blank Received										X
31	MW02A_200615	15/6/20					X			X				
32	QC300_200615									X			X	
33	TB01_200615													X
34	TS01_200615													X
				TOTAL										

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2021234**	Page	: 1 of 46
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 18-Jun-2020 14:10
Order number	: ----	Date Analysis Commenced	: 22-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020 13:03
Sampler	: Lachlan Lewis		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 34		
No. of samples analysed	: 33		

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*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

- 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.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EG020 : Positive result for sample ES2021234-032 has been confirmed by reanalysis.
- EG035: Poor matrix spike recovery was obtained for Mercury on sample ES2021166 # 1. Confirmed by re-analysis.
- EP071: LOR of sample raised due to the high amount of moisture content present.
- EP075(SIM): LOR raised due to the high amount of moisture present.
- EP068: LOR for sample raised due to the high amount of moisture present.
- EP068: Particular samples required dilution due to matrix interferences. LOR values have been adjusted accordingly.
- EP080: Sample TRIP SPIKE contains volatile compounds spiked into the sample containers prior to dispatch from the laboratory. BTEXN compounds spiked at 20 ug/L.
- EP80: Sample TRIP SPIKE contains volatile compounds spiked into the sample containers prior to dispatch from the laboratory.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	----	56.9	22.7
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	----	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	----	No
Asbestos Type	1332-21-4	-	--	-	-	-	----	-
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	----	No
Organic Fibre	----	0.1	g/kg	Yes	No	No	----	No
Sample weight (dry)	----	0.01	g	378	352	383	----	288
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	----	A. SMYLIE
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	8	<5
Cadmium	7440-43-9	1	mg/kg	----	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	----	----	----	32	41
Copper	7440-50-8	5	mg/kg	----	----	----	28	10
Lead	7439-92-1	5	mg/kg	----	----	----	28	11
Nickel	7440-02-0	2	mg/kg	----	----	----	25	9
Zinc	7440-66-6	5	mg/kg	----	----	----	46	17
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.8	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.8	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.8	<0.5
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.8	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.8	<0.5
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.8	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.8	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.8	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.8	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.8	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	----	<0.8	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	----	<0.8	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.8	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.8	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.8	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.8	<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	----	----	----	**1.0**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	**1.9**	**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	----	----	----	**110**	<100
C29 - C36 Fraction	----	100	mg/kg	----	----	----	**270**	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	----	**380**	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	----	----	----	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	----	----	----	**280**	<100
>C34 - C40 Fraction	----	100	mg/kg	----	----	----	**200**	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	----	----	**480**	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	----	----	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
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
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	----	**0.0023**	**0.0021**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	<0.0002	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	<0.0002	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	----	<0.0005	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	----	**0.0023**	**0.0021**
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	----	----	**0.0023**	**0.0021**
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	----	----	**0.0023**	**0.0021**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	**122**	**114**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SS03_200617	SS04_200617	SS05_200617	SD12_200617	SD10_200617
			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	ES2021234-001	ES2021234-002	ES2021234-003	ES2021234-004	ES2021234-005
				Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	82.6	85.7
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	98.3	88.1
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	99.1	95.2
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	92.3	84.7
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	105	101
Anthracene-d10	1719-06-8	0.5	%	----	----	----	108	106
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	103	101
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	93.6	96.7
Toluene-D8	2037-26-5	0.2	%	----	----	----	89.9	90.8
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	95.0	97.9
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	----	104	100
13C8-PFOA	----	0.0002	%	----	----	----	91.0	77.0

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	78.4	24.0	27.7	22.0	44.7
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	-	--	----	----	----	-	----
Synthetic Mineral Fibre	----	0.1	g/kg	----	----	----	No	----
Organic Fibre	----	0.1	g/kg	----	----	----	No	----
Sample weight (dry)	----	0.01	g	----	----	----	338	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	A. SMYLIE	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	8	8	5	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	16	24	24	36
Copper	7440-50-8	5	mg/kg	21	8	15	15	20
Lead	7439-92-1	5	mg/kg	12	13	25	13	17
Nickel	7440-02-0	2	mg/kg	8	7	8	13	21
Zinc	7440-66-6	5	mg/kg	86	16	16	20	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
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.20	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin	72-20-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.37	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<2.5	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<2.5	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.20	<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	<0.20	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<2.5	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<2.5	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<2.5	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.62	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthene	83-32-9	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<1.0	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<1.0	<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	**1.2**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**2.4**	**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	<60	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	**890**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**2560**	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**3450**	<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	<60	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**2340**	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	**1760**	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**4100**	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<60	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
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
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
2.4-DB	94-82-6	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Dicamba	1918-00-9	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Mecoprop	93-65-2	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
MCPA	94-74-6	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
2.4-DP	120-36-5	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
2.4-D	94-75-7	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Triclopyr	55335-06-3	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
2.4.5-T	93-76-5	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
MCPB	94-81-5	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Picloram	1918-02-1	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Clopyralid	1702-17-6	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
Fluroxypyr	69377-81-7	0.02	mg/kg	----	<0.02	----	<0.02	<0.02
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0014**	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0432**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0012	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0012	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0031	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0012	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0031	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0031	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0031	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0031	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0012	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0012	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SD09_200617	SD14_200616	SD06_200616	SD05_200616	SD04_200616
			Client sampling date / time	17-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	ES2021234-006	ES2021234-013	ES2021234-014	ES2021234-015	ES2021234-016
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0012	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0012	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0012	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0012	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	**0.0446**	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	**0.0446**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	**0.0446**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**102**	**122**	**114**	**115**	**119**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**73.9**	**88.5**	**76.0**	**112**	**82.5**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**99.8**	**98.7**	**99.5**	**101**	**92.6**
2-Chlorophenol-D4	93951-73-6	0.5	%	**101**	**100**	**99.0**	**103**	**95.1**
2.4.6-Tribromophenol	118-79-6	0.5	%	**99.8**	**94.0**	**89.6**	**94.6**	**75.2**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**112**	**108**	**109**	**112**	**105**
Anthracene-d10	1719-06-8	0.5	%	**109**	**111**	**112**	**117**	**109**
4-Terphenyl-d14	1718-51-0	0.5	%	**108**	**115**	**107**	**114**	**105**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**88.6**	**103**	**89.0**	**94.7**	**89.6**
Toluene-D8	2037-26-5	0.2	%	**84.0**	**99.4**	**87.3**	**94.0**	**91.2**
4-Bromofluorobenzene	460-00-4	0.2	%	**82.1**	**102**	**91.7**	**96.7**	**94.0**
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	0.02	%	----	**71.4**	----	**93.6**	**95.5**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**80.0**	----	----	----	----
13C8-PFOA	----	0.0002	%	**60.0**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC101_200616	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2021234-017	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content								
Moisture Content	----	1.0	%	**23.4**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**6**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**23**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**15**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**13**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	**13**	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**18**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC101_200616	----	----	----	----
			Client sampling date / time	16-Jun-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2021234-017	--------	--------	--------	--------
				Result	----	----	----	----
EP080: BTEXN - Continued								
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**87.6**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%	**85.5**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	**92.4**	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	**118**	----	----	----	----
13C8-PFOA	----	0.0002	%	**70.0**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	**0.001**	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	**0.015**	<0.001	----
Copper	7440-50-8	0.001	mg/L	**0.002**	**0.003**	**0.001**	<0.001	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Nickel	7440-02-0	0.001	mg/L	**0.005**	**0.002**	<0.001	<0.001	----
Zinc	7440-66-6	0.005	mg/L	**0.234**	**0.063**	**0.015**	<0.005	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
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	<0.5	<0.5	----	----
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	<0.5	----	----
gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	<0.5	----	----
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
4.4`-DDT	50-29-3	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Methoxychlor	72-43-5	2.0	µg/L	<2.0	<2.0	<2.0	----	----
^ Total Chlordane (sum)	----	0.5	µg/L	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Monocrotophos	6923-22-4	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Parathion-methyl	298-00-0	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Parathion	56-38-2	2.0	µg/L	<2.0	<2.0	<2.0	----	----
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	<0.5	----	----
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	----	----	<5	----	----
1.2-Dichloropropane	78-87-5	5	µg/L	----	----	<5	----	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	----	----	<5	----	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	----	----	<5	----	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	----	----	<5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	----	----	<50	----	----
Chloromethane	74-87-3	50	µg/L	----	----	<50	----	----
Vinyl chloride	75-01-4	50	µg/L	----	----	<50	----	----
Bromomethane	74-83-9	50	µg/L	----	----	<50	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Chloroethane	75-00-3	50	µg/L	----	----	<50	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	----	----	<50	----	----
1.1-Dichloroethene	75-35-4	5	µg/L	----	----	<5	----	----
Iodomethane	74-88-4	5	µg/L	----	----	<5	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	----	----	<5	----	----
1.1-Dichloroethane	75-34-3	5	µg/L	----	----	<5	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L	----	----	<5	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L	----	----	<5	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L	----	----	<5	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	----	----	<5	----	----
1.2-Dichloroethane	107-06-2	5	µg/L	----	----	<5	----	----
Trichloroethene	79-01-6	5	µg/L	----	----	<5	----	----
Dibromomethane	74-95-3	5	µg/L	----	----	<5	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	----	----	<5	----	----
1.3-Dichloropropane	142-28-9	5	µg/L	----	----	<5	----	----
Tetrachloroethene	127-18-4	5	µg/L	----	----	<5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	----	----	<5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	----	----	<5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	----	----	<5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	----	----	<5	----	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	----	----	<5	----	----
Pentachloroethane	76-01-7	5	µg/L	----	----	<5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	----	----	<5	----	----
Hexachlorobutadiene	87-68-3	5	µg/L	----	----	<5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	----	----	<5	----	----
Bromobenzene	108-86-1	5	µg/L	----	----	<5	----	----
2-Chlorotoluene	95-49-8	5	µg/L	----	----	<5	----	----
4-Chlorotoluene	106-43-4	5	µg/L	----	----	<5	----	----
1.3-Dichlorobenzene	541-73-1	5	µg/L	----	----	<5	----	----
1.4-Dichlorobenzene	106-46-7	5	µg/L	----	----	<5	----	----
1.2-Dichlorobenzene	95-50-1	5	µg/L	----	----	<5	----	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L	----	----	<5	----	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	----	----	<5	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP074G: Trihalomethanes								
Chloroform	67-66-3	5	µg/L	----	----	<5	----	----
Bromodichloromethane	75-27-4	5	µg/L	----	----	<5	----	----
Dibromochloromethane	124-48-1	5	µg/L	----	----	<5	----	----
Bromoform	75-25-2	5	µg/L	----	----	<5	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Fluorene	86-73-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Anthracene	120-12-7	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Pyrene	129-00-0	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Chrysene	218-01-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	<0.7	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	<100	<100	<100	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
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	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	**0.009**	<0.002	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	**0.018**	**0.017**	**0.013**	<0.002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	**0.024**	**0.020**	**0.003**	<0.002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	**0.016**	**0.021**	<0.002	<0.002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	**0.022**	**0.024**	**0.008**	<0.002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	**0.015**	**0.022**	<0.002	<0.002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	**0.005**	**0.005**	<0.002	<0.002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	**0.038**	**0.023**	<0.005	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	**0.138**	**0.132**	**0.033**	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	**0.042**	**0.037**	**0.016**	<0.002	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	**0.138**	**0.132**	**0.033**	<0.002	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	1	%	----	----	**104**	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	**84.0**	**71.0**	**68.6**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	**90.8**	**72.9**	**68.9**	----	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	5	%	----	----	**99.5**	----	----
Toluene-D8	2037-26-5	5	%	----	----	**103**	----	----
4-Bromofluorobenzene	460-00-4	5	%	----	----	**93.9**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	SW12_200617	SW09_200617	MW01_200617	QC302_200617	TB03_200617
			Client sampling date / time	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	17-Jun-2020 00:00	12-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-007	ES2021234-008	ES2021234-009	ES2021234-010	ES2021234-011
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	1.0	%	29.4	29.6	28.4	28.9	----
2-Chlorophenol-D4	93951-73-6	1.0	%	63.9	60.9	48.9	63.1	----
2.4.6-Tribromophenol	118-79-6	1.0	%	95.0	78.0	68.2	77.8	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	62.0	65.2	56.8	56.6	----
Anthracene-d10	1719-06-8	1.0	%	90.8	81.6	74.1	87.7	----
4-Terphenyl-d14	1718-51-0	1.0	%	95.4	83.0	78.1	96.5	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	110	114	102	105	104
Toluene-D8	2037-26-5	2	%	117	126	96.0	112	113
4-Bromofluorobenzene	460-00-4	2	%	107	116	101	105	100
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	----	----	100	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	93.8	94.8	89.8	94.0	----
13C8-PFOA	----	0.002	%	76.9	76.8	79.6	74.0	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	----	**0.002**	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	----	**0.004**	<0.001	<0.001	**0.001**
Copper	7440-50-8	0.001	mg/L	----	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	----	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	----	<0.001	**0.004**	**0.004**	**0.248**
Zinc	7440-66-6	0.005	mg/L	----	**0.009**	**0.364**	**0.515**	**0.150**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
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	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	----	----	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	µg/L	----	----	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	µg/L	----	----	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	----	----	<0.5	<0.5	<0.5
trans-Chlordane	5103-74-2	0.5	µg/L	----	----	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
cis-Chlordane	5103-71-9	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	µg/L	----	----	<0.5	<0.5	<0.5
4.4`-DDE	72-55-9	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	µg/L	----	----	<0.5	<0.5	<0.5
4.4`-DDD	72-54-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Endrin aldehyde	7421-93-4	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
4.4`-DDT	50-29-3	2.0	µg/L	----	----	<2.0	<2.0	<2.0
Endrin ketone	53494-70-5	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Methoxychlor	72-43-5	2.0	µg/L	----	----	<2.0	<2.0	<2.0
^ Total Chlordane (sum)	----	0.5	µg/L	----	----	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	----	----	<0.5	<0.5	<0.5
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	----	----	<0.5	<0.5	<0.5
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Demeton-S-methyl	919-86-8	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Monocrotophos	6923-22-4	2.0	µg/L	----	----	<2.0	<2.0	<2.0
Dimethoate	60-51-5	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Parathion-methyl	298-00-0	2.0	µg/L	----	----	<2.0	<2.0	<2.0
Malathion	121-75-5	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Parathion	56-38-2	2.0	µg/L	----	----	<2.0	<2.0	<2.0
Pirimphos-ethyl	23505-41-1	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Carbophenothion	786-19-6	0.5	µg/L	----	----	<0.5	<0.5	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	----	----	<0.5	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	5	µg/L	----	----	----	<5	----
1.2-Dichloropropane	78-87-5	5	µg/L	----	----	----	<5	----
cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	----	----	----	<5	----
trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	----	----	----	<5	----
1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	----	----	----	<5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	50	µg/L	----	----	----	<50	----
Chloromethane	74-87-3	50	µg/L	----	----	----	<50	----
Vinyl chloride	75-01-4	50	µg/L	----	----	----	<50	----
Bromomethane	74-83-9	50	µg/L	----	----	----	<50	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
Chloroethane	75-00-3	50	µg/L	----	----	----	<50	----
Trichlorofluoromethane	75-69-4	50	µg/L	----	----	----	<50	----
1.1-Dichloroethene	75-35-4	5	µg/L	----	----	----	<5	----
Iodomethane	74-88-4	5	µg/L	----	----	----	<5	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L	----	----	----	<5	----
1.1-Dichloroethane	75-34-3	5	µg/L	----	----	----	<5	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L	----	----	----	<5	----
1.1.1-Trichloroethane	71-55-6	5	µg/L	----	----	----	<5	----
1.1-Dichloropropylene	563-58-6	5	µg/L	----	----	----	<5	----
Carbon Tetrachloride	56-23-5	5	µg/L	----	----	----	<5	----
1.2-Dichloroethane	107-06-2	5	µg/L	----	----	----	<5	----
Trichloroethene	79-01-6	5	µg/L	----	----	----	<5	----
Dibromomethane	74-95-3	5	µg/L	----	----	----	<5	----
1.1.2-Trichloroethane	79-00-5	5	µg/L	----	----	----	<5	----
1.3-Dichloropropane	142-28-9	5	µg/L	----	----	----	<5	----
Tetrachloroethene	127-18-4	5	µg/L	----	----	----	<5	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	----	----	----	<5	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	----	----	----	<5	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	----	----	----	<5	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	----	----	----	<5	----
1.2.3-Trichloropropane	96-18-4	5	µg/L	----	----	----	<5	----
Pentachloroethane	76-01-7	5	µg/L	----	----	----	<5	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	----	----	----	<5	----
Hexachlorobutadiene	87-68-3	5	µg/L	----	----	----	<5	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	5	µg/L	----	----	----	<5	----
Bromobenzene	108-86-1	5	µg/L	----	----	----	<5	----
2-Chlorotoluene	95-49-8	5	µg/L	----	----	----	<5	----
4-Chlorotoluene	106-43-4	5	µg/L	----	----	----	<5	----
1.3-Dichlorobenzene	541-73-1	5	µg/L	----	----	----	<5	----
1.4-Dichlorobenzene	106-46-7	5	µg/L	----	----	----	<5	----
1.2-Dichlorobenzene	95-50-1	5	µg/L	----	----	----	<5	----
1.2.4-Trichlorobenzene	120-82-1	5	µg/L	----	----	----	<5	----
1.2.3-Trichlorobenzene	87-61-6	5	µg/L	----	----	----	<5	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP074G: Trihalomethanes								
Chloroform	67-66-3	5	µg/L	----	----	----	<5	----
Bromodichloromethane	75-27-4	5	µg/L	----	----	----	<5	----
Dibromochloromethane	124-48-1	5	µg/L	----	----	----	<5	----
Bromoform	75-25-2	5	µg/L	----	----	----	<5	----
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	<20	<20
C10 - C14 Fraction	----	50	µg/L	----	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	----	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	----	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	----	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	----	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	----	<100	<100	<100	100

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C16 - C34 Fraction	----	100	µg/L	----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	----	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	----	<100	<100	<100	**100**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	----	<100	<100	<100	**100**
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	**18**	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	**17**	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	**16**	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	**16**	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	**16**	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	**32**	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	**83**	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	**18**	<5	<5	<5	<5
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	----	----	<10	<10	<10
2.4-DB	94-82-6	10	µg/L	----	----	<10	<10	<10
Dicamba	1918-00-9	10	µg/L	----	----	<10	<10	<10
Mecoprop	93-65-2	10	µg/L	----	----	<10	<10	<10
MCPA	94-74-6	10	µg/L	----	----	<10	<10	<10
2.4-DP	120-36-5	10	µg/L	----	----	<10	<10	<10
2.4-D	94-75-7	10	µg/L	----	----	<10	<10	<10
Triclopyr	55335-06-3	10	µg/L	----	----	<10	<10	<10
Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	----	----	<10	<10	<10
2.4.5-T	93-76-5	10	µg/L	----	----	<10	<10	<10
MCPB	94-81-5	10	µg/L	----	----	<10	<10	<10
Picloram	1918-02-1	10	µg/L	----	----	<10	<10	<10
Clopyralid	1702-17-6	10	µg/L	----	----	<10	<10	<10
Fluroxypyr	69377-81-7	10	µg/L	----	----	<10	<10	<10
2.6-D	575-90-6	10	µg/L	----	----	<10	<10	<10
2.4.6-T	575-89-3	10	µg/L	----	----	<10	<10	<10
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	1	%	----	----	----	**80.6**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	----	----	**87.7**	**68.8**	**76.0**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	----	----	**90.8**	**64.1**	**77.8**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	5	%	----	----	----	**105**	----
Toluene-D8	2037-26-5	5	%	----	----	----	**110**	----
4-Bromofluorobenzene	460-00-4	5	%	----	----	----	**102**	----
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TS03_200617	MW02B_200616	MW03A_200616	MW03B_200616	MW04_200616
			Client sampling date / time	11-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	ES2021234-012	ES2021234-018	ES2021234-019	ES2021234-020	ES2021234-021
				Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued								
Phenol-d6	13127-88-3	1.0	%	----	----	28.1	17.4	----
2-Chlorophenol-D4	93951-73-6	1.0	%	----	----	67.6	37.8	----
2.4.6-Tribromophenol	118-79-6	1.0	%	----	----	96.6	43.9	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	----	----	79.2	53.1	----
Anthracene-d10	1719-06-8	1.0	%	----	----	97.8	74.8	----
4-Terphenyl-d14	1718-51-0	1.0	%	----	----	92.9	63.5	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	113	105	114	108	105
Toluene-D8	2037-26-5	2	%	124	110	121	102	114
4-Bromofluorobenzene	460-00-4	2	%	116	104	109	104	108
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	----	----	112	106	111
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	92.4	89.7	89.6	99.2
13C8-PFOA	----	0.002	%	----	74.9	71.7	69.5	68.4

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.002**	**0.001**	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	**0.004**	**0.007**	**0.003**	**0.002**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.001**	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	**0.004**	**0.004**	**0.006**	**0.005**	**0.003**
Zinc	7440-66-6	0.005	mg/L	**0.490**	**0.037**	**0.010**	**0.006**	**0.037**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
gamma-BHC	58-89-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
trans-Chlordane	5103-74-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
cis-Chlordane	5103-71-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
4.4`-DDE	72-55-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
4.4`-DDD	72-54-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endrin aldehyde	7421-93-4	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
4.4`-DDT	50-29-3	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Endrin ketone	53494-70-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Methoxychlor	72-43-5	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
^ Total Chlordane (sum)	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Demeton-S-methyl	919-86-8	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Monocrotophos	6923-22-4	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Dimethoate	60-51-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Parathion-methyl	298-00-0	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Malathion	121-75-5	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Parathion	56-38-2	2.0	µg/L	----	<2.0	<2.0	<2.0	<2.0
Pirimphos-ethyl	23505-41-1	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Carbophenothion	786-19-6	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.8	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	----	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	----	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	**160**	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L	<50	**80**	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	**240**	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	<100	**140**	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	**140**	<100	<100	<100
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	**140**	<100	<100	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	----	<10	<10	----	----
2.4-DB	94-82-6	10	µg/L	----	<10	<10	----	----
Dicamba	1918-00-9	10	µg/L	----	<10	<10	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued								
Mecoprop	93-65-2	10	µg/L	----	<10	<10	----	----
MCPA	94-74-6	10	µg/L	----	<10	<10	----	----
2.4-DP	120-36-5	10	µg/L	----	<10	<10	----	----
2.4-D	94-75-7	10	µg/L	----	<10	<10	----	----
Triclopyr	55335-06-3	10	µg/L	----	<10	<10	----	----
Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	----	<10	<10	----	----
2.4.5-T	93-76-5	10	µg/L	----	<10	<10	----	----
MCPB	94-81-5	10	µg/L	----	<10	<10	----	----
Picloram	1918-02-1	10	µg/L	----	<10	<10	----	----
Clopyralid	1702-17-6	10	µg/L	----	<10	<10	----	----
Fluroxypyr	69377-81-7	10	µg/L	----	<10	<10	----	----
2.6-D	575-90-6	10	µg/L	----	<10	<10	----	----
2.4.6-T	575-89-3	10	µg/L	----	<10	<10	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	**0.021**	**0.006**	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	**0.019**	**0.070**	**0.014**	**0.004**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	**0.009**	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	**0.003**	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC103_200616	SW14_200616	SW06_200616	SW05_200616	SW04_200616
			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	ES2021234-022	ES2021234-023	ES2021234-024	ES2021234-025	ES2021234-026
				Result	Result	Result	Result	Result
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	0.019	0.103	0.020	0.004
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	0.019	0.091	0.020	0.004
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	0.019	0.103	0.020	0.004
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	----	75.1	71.3	79.4	91.1
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	----	81.4	74.4	84.5	93.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	----	26.6	22.5	23.5	28.6
2-Chlorophenol-D4	93951-73-6	1.0	%	----	43.6	45.2	48.0	61.4
2.4.6-Tribromophenol	118-79-6	1.0	%	----	74.2	70.1	66.8	81.1
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	----	60.2	61.6	54.1	58.9
Anthracene-d10	1719-06-8	1.0	%	----	65.1	69.9	75.2	81.7
4-Terphenyl-d14	1718-51-0	1.0	%	----	88.8	76.7	81.2	92.1
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	106	120	130	120	120
Toluene-D8	2037-26-5	2	%	116	119	120	117	109
4-Bromofluorobenzene	460-00-4	2	%	106	106	109	101	95.9
EP202S: Phenoxyacetic Acid Herbicide Surrogate								
2.4-Dichlorophenyl Acetic Acid	19719-28-9	10	%	----	97.4	96.9	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	90.7	87.8	97.7	90.5	95.0
13C8-PFOA	----	0.002	%	69.4	63.8	69.7	70.1	68.1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC100_200616	QC301_200616	TB02_200616	MW02A_200615	QC300_200615
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	12-Jun-2020 00:00	15-Jun-2020 00:00	15-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-027	ES2021234-028	ES2021234-029	ES2021234-031	ES2021234-032
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	----	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	----	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	----	<0.001	----	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	----	<0.001	----	**0.018**	**0.005**
Lead	7439-92-1	0.001	mg/L	----	<0.001	----	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	----	<0.001	----	**0.009**	<0.001
Zinc	7440-66-6	0.005	mg/L	----	<0.005	----	**0.011**	<0.005
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	----	<0.0001	<0.0001
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.5	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	----	<1.0	----	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	----	<1.0	----	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	----	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	----	<0.5	----	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	----	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	----	<50	----	<50	<50
C15 - C28 Fraction	----	100	µg/L	----	<100	----	**280**	<100
C29 - C36 Fraction	----	50	µg/L	----	<50	----	**280**	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	----	<50	----	**560**	<50

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC100_200616	QC301_200616	TB02_200616	MW02A_200615	QC300_200615
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	12-Jun-2020 00:00	15-Jun-2020 00:00	15-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-027	ES2021234-028	ES2021234-029	ES2021234-031	ES2021234-032
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	----	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L	----	<100	----	<100	<100
>C16 - C34 Fraction	----	100	µg/L	----	<100	----	**440**	<100
>C34 - C40 Fraction	----	100	µg/L	----	<100	----	**170**	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	----	<100	----	**610**	<100
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	----	<100	----	<100	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	----	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	----	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	----	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	----	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L	----	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L	----	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L	----	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L	----	<5	<5	<5	<5
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	----	**0.007**	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	----	**0.003**	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	----	**0.006**	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	----	<0.002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	----	<0.002	<0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	----	<0.002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	----	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	----	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	----	<0.002	<0.002

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC100_200616	QC301_200616	TB02_200616	MW02A_200615	QC300_200615
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	12-Jun-2020 00:00	15-Jun-2020 00:00	15-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-027	ES2021234-028	ES2021234-029	ES2021234-031	ES2021234-032
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	----	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	----	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	----	<0.002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	----	<0.002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	----	<0.002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	----	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	----	<0.002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	----	<0.005	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	----	<0.005	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	----	<0.002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	----	<0.005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	----	<0.005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	----	<0.005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	----	<0.005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	----	<0.002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	----	<0.002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	----	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	----	<0.005	<0.005

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC100_200616	QC301_200616	TB02_200616	MW02A_200615	QC300_200615
			Client sampling date / time	16-Jun-2020 00:00	16-Jun-2020 00:00	12-Jun-2020 00:00	15-Jun-2020 00:00	15-Jun-2020 00:00
Compound	CAS Number	LOR	Unit	ES2021234-027	ES2021234-028	ES2021234-029	ES2021234-031	ES2021234-032
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	----	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	----	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	----	----	**0.016**	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	<0.002	----	**0.006**	<0.002
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	<0.002	----	**0.013**	<0.002
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	----	**27.7**	----	**26.6**	**28.6**
2-Chlorophenol-D4	93951-73-6	1.0	%	----	**58.6**	----	**54.6**	**63.6**
2.4.6-Tribromophenol	118-79-6	1.0	%	----	**70.7**	----	**84.4**	**73.7**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	----	**53.8**	----	**60.8**	**54.7**
Anthracene-d10	1719-06-8	1.0	%	----	**76.4**	----	**83.4**	**80.1**
4-Terphenyl-d14	1718-51-0	1.0	%	----	**83.5**	----	**90.7**	**94.5**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**135**	**123**	**118**	**123**	**116**
Toluene-D8	2037-26-5	2	%	**117**	**104**	**98.4**	**103**	**97.3**
4-Bromofluorobenzene	460-00-4	2	%	**113**	**104**	**99.4**	**103**	**97.9**
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	**91.8**	**90.3**	----	**94.2**	**96.0**
13C8-PFOA	----	0.002	%	**65.2**	**71.3**	----	**67.7**	**65.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	TB01_200615	TS01_200615	----	----	----
			Client sampling date / time	15-Jun-2020 00:00	15-Jun-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2021234-033	ES2021234-034	--------	--------	--------
				Result	Result	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	**17**	----	----	----
Toluene	108-88-3	2	µg/L	<2	**15**	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	**14**	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	**29**	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	**16**	----	----	----
^ **Total Xylenes**	----	2	µg/L	<2	**45**	----	----	----
^ **Sum of BTEX**	----	1	µg/L	<1	**91**	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**118**	**108**	----	----	----
Toluene-D8	2037-26-5	2	%	**97.2**	**102**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	**97.8**	**102**	----	----	----

Analytical Results

Descriptive Results

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	SS03_200617 - 17-Jun-2020 00:00	Mid brown soil.
EA200: Description	SS04_200617 - 17-Jun-2020 00:00	Mid brown soil.
EA200: Description	SS05_200617 - 17-Jun-2020 00:00	Mid brown soil.
EA200: Description	SD10_200617 - 17-Jun-2020 00:00	Mid brown soil.
EA200: Description	SD05_200616 - 16-Jun-2020 00:00	Mid brown soil.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	45	139
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	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	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2.4-Dichlorophenyl Acetic Acid	19719-28-9	64	140
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2021234**	Page	: 1 of 28
Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: J200300 Brunslea Park DSI	Date Samples Received	: 18-Jun-2020
Order number	: ----	Date Analysis Commenced	: 22-Jun-2020
C-O-C number	: ----	Issue Date	: 29-Jun-2020
Sampler	: Lachlan Lewis		
Site	: ----		
Quote number	: ME/359/20		
No. of samples received	: 34		
No. of samples analysed	: 33		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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: 3095160)									
ES2021160-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	53	56	6.43	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	6	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	9	24.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	8	8	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.00	No Limit
ES2021234-017	QC101_200616	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	23	32	32.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	13	13	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	6	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	15	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	13	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	18	19	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3095165)									
ES2021161-001	Anonymous	EA055: Moisture Content	----	0.1	%	16.6	18.7	11.7	0% - 50%
EW2002873-001	Anonymous	EA055: Moisture Content	----	0.1	%	22.0	19.9	10.2	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3095161)									
ES2021160-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2021234-017	QC101_200616	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3090930)									
ES2021240-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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: 3090930) - continued									
ES2021240-001	Anonymous	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3090930)									
ES2021240-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3090928)									
ES2021234-004	SD12_200617	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.8	<0.8	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)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3090928) - continued									
ES2021234-004	SD12_200617	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.8	<0.8	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2021240-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<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): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3090929)									

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: 3090929) - continued									
ES2021234-004	SD12_200617	EP071: C15 - C28 Fraction	----	100	mg/kg	110	130	17.1	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	270	250	6.47	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2021240-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3092511)									
ES2021111-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2021160-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	37	36	3.32	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3090929)									
ES2021234-004	SD12_200617	EP071: >C16 - C34 Fraction	----	100	mg/kg	280	270	5.06	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	200	240	19.1	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2021240-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	110	120	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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3092511)									
ES2021111-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2021160-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	48	48	0.00	No Limit
EP080: BTEXN (QC Lot: 3092511)									
ES2021111-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	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
ES2021160-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	4.6	4.6	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	1.4	1.3	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	7.1	7.3	3.17	0% - 50%
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	2.7	2.8	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3092180)									
ES2021111-006	Anonymous	EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Mecoprop	93-65-2	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	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3092180) - continued									
ES2021111-006	Anonymous	EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
ES2021111-007	Anonymous	EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
		EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	<0.02	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3095357)									
ES2021234-004	SD12_200617	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0023	0.0024	5.88	0% - 50%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
ES2021282-007	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0027	0.0024	13.4	0% - 50%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0002	0.0002	0.00	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0044	0.0047	5.95	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3095357)									
ES2021234-004	SD12_200617	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	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					
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3095357) - continued									
ES2021234-004	SD12_200617	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
ES2021282-007	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0006	0.0005	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0045	0.0040	11.1	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0004	0.0003	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0022	0.0022	0.00	0% - 50%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0003	0.0003	0.00	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0027	0.0024	13.3	0% - 50%
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0005	0.0004	22.9	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3095357)									
ES2021234-004	SD12_200617	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2021282-007	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0002	0.0002	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	0.0009	0.0009	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3095357) - continued									
ES2021282-007	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3095357)									
ES2021234-004	SD12_200617	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
ES2021282-007	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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 (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3093893)									
ES2021166-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0110	0.0110	0.00	0% - 20%
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.010	0.010	0.00	0% - 50%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.106	0.107	0.00	0% - 20%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.602	0.604	0.332	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.027	0.026	0.00	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.116	0.114	1.06	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	13.4	13.5	0.888	0% - 20%
ES2021213-001	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	0.016	0.017	0.00	0% - 50%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	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: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	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					
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3093899)									
ES2021234-022	QC103_200616	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	<0.001	<0.001	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	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: Nickel	7440-02-0	0.001	mg/L	0.004	0.004	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.490	0.497	1.51	0% - 20%
EW2002837-001	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	0.002	0.002	0.00	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	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: Nickel	7440-02-0	0.001	mg/L	0.003	0.004	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3093896)									
ES2021166-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
ES2021166-012	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3093898)									
ES2021234-023	SW14_200616	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EW2002831-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EP074D: Fumigants (QC Lot: 3094707)									
ES2021207-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.00	No Limit
ES2021207-011	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3094707)									
ES2021207-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	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: 3094707) - continued									
ES2021207-001	Anonymous	EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.00	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.00	No Limit
ES2021207-011	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	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					
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3094707) - continued									
ES2021207-011	Anonymous	EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.00	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.00	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3094707)									
ES2021207-001	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.00	No Limit
ES2021207-011	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3094707)									
ES2021207-001	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.00	No Limit
ES2021207-011	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.00	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3094704)									
ES2021234-007	SW12_200617	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
ES2021234-024	SW06_200616	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	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 Petroleum Hydrocarbons (QC Lot: 3094708)									
ES2021207-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
ES2021207-011	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3094704)									
ES2021234-007	SW12_200617	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
ES2021234-024	SW06_200616	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3094708)									
ES2021207-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
ES2021207-011	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 3094704)									
ES2021234-007	SW12_200617	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
ES2021234-024	SW06_200616	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
EP080: BTEXN (QC Lot: 3094708)									
ES2021207-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		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
ES2021207-011	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	14	14	0.00	No Limit
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3092715)									

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 (%)*
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3092715) - continued									
ES2021234-024	SW06_200616	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

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: 3095160)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	120	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	87.8	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	120	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	107	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	119	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	120	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	108	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3095161)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	81.7	70.0	105
EP068A: Organochlorine Pesticides (OC) (QCLot: 3090930)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	106	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	102	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.5	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.4	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.5	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	100	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	102	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	98.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3090930)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	77.7	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	62.0	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3090930) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	99.6	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	105	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	95.3	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.0	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	106	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	78.1	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3090928)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.5	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.6	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	93.9	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	97.4	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	98.2	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	102	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	105	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	101	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	85.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	95.0	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	79.9	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.9	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	93.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.0	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	84.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	87.9	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090929)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	100	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	109	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	101	71.0	129

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
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3092511)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	99.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090929)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	100	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	107	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	99.9	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3092511)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	105	68.4	128
EP080: BTEXN (QCLot: 3092511)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	101	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	102	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	98.5	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	105	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	84.6	63.0	119
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3092180)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	89.3	54.4	128
EP202: 2.4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	95.5	45.5	130
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	92.4	51.7	135
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	97.0	60.0	130
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	85.7	56.8	131
EP202: 2.4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	85.9	50.0	141
EP202: 2.4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	94.2	68.5	131
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	98.2	50.8	141
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	88.4	40.8	126
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	101	57.4	139
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	100	38.9	137
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	100	48.7	129
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	100	49.4	106
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	90.9	53.2	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3095357)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	79.2	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3095357)								

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3095357) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	82.7	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.8	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	124	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	125	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	83.8	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3095357)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.0	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	115	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.8	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3095357)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	82.8	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	100	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	74.4	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	69.2	143

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3093893)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	88.4	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	87.7	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	87.6	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	86.1	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	87.5	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	87.1	82.0	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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3093893) - continued								
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	89.4	81.0	117
EG020F: Dissolved Metals by ICP-MS (QCLot: 3093899)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	92.5	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	88.1	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	88.1	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	89.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	89.0	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	88.2	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	88.3	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3093896)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.6	83.0	105
EG035F: Dissolved Mercury by FIMS (QCLot: 3093898)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	94.0	83.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3090622)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	86.8	68.9	113
EP068A: Organochlorine Pesticides (OC) (QCLot: 3090621)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	81.4	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	78.2	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	90.3	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	84.9	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	91.1	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	80.5	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	92.6	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	85.5	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	85.7	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	87.6	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	87.3	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	87.7	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	83.7	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	88.4	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	91.0	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	98.5	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	78.5	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	87.1	65.2	112
EP068: 4.4`-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	86.7	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	82.9	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	90.7	61.1	114
EP068A: Organochlorine Pesticides (OC) (QCLot: 3095684)								

Sub-Matrix: **WATER**

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
EP068A: Organochlorine Pesticides (OC) (QCLot: 3095684) - continued								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	83.7	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	76.9	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	95.9	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	91.6	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	96.0	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	85.8	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	93.1	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	90.6	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	90.2	64.1	110
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	92.8	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	90.8	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	91.9	65.2	113
EP068: 4.4`-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	86.1	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	92.8	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	93.7	67.3	114
EP068: 4.4`-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	97.8	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	80.5	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	88.2	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	85.2	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	94.5	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3090621)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	80.5	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	90.0	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	25.5	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	90.7	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	91.5	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	91.1	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	89.6	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	95.2	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	93.5	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	91.6	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	85.2	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	87.5	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	95.2	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	87.4	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	93.2	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	87.8	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	90.9	74.0	120

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: 3090621) - continued								
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	90.6	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	86.7	51.6	128
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3095684)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	84.9	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	106	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	23.3	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	95.5	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	98.0	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	96.4	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	95.2	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	97.3	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	96.3	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	94.9	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	89.9	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	89.3	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	96.9	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	90.3	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	95.8	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	90.8	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	92.6	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	93.2	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	87.8	51.6	128
EP074D: Fumigants (QCLot: 3094707)								
EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	116	68.0	122
EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	114	76.0	118
EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	112	62.0	120
EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	105	60.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	# 118	69.0	117
EP074E: Halogenated Aliphatic Compounds (QCLot: 3094707)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	65.0	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	89.1	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	123	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	96.7	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	108	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	110	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	110	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	90.3	70.2	128
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	107	74.0	118

Sub-Matrix: **WATER**

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: 3094707) - continued								
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	114	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	111	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	112	67.0	119
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	119	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	# 121	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	107	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	114	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	99.3	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	102	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	112	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	93.2	72.0	124
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	108	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	116	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	114	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	116	70.0	124
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	126	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	118	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	94.8	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	104	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3094707)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	108	79.0	117
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	109	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	116	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	116	73.0	119
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	114	75.0	117
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	107	74.0	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	105	75.0	117
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	114	61.0	125
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	106	67.0	123
EP074G: Trihalomethanes (QCLot: 3094707)								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	117	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	109	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	110	65.0	115
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	103	73.5	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3090619)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	70.9	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	75.9	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	75.7	62.2	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3090619) - continued								
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	85.3	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	91.0	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	77.7	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	99.5	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	98.1	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	85.6	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	94.6	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	95.6	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	93.7	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	92.5	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	98.5	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	97.6	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	94.3	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090620)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	79.2	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	89.9	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	87.5	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094704)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	81.4	75.0	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094708)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	86.8	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090620)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	80.1	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	90.9	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	99.7	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094704)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	81.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094708)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	89.2	75.0	127
EP080: BTEXN (QCLot: 3094704)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	86.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	89.3	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	92.3	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	88.6	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	92.0	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	103	70.0	120

Sub-Matrix: **WATER**

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
EP080: BTEXN (QCLot: 3094708)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	101	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	94.8	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	99.2	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	92.8	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	100	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	104	70.0	120
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3092715)								
EP202-SL: 4-Chlorophenoxy acetic acid	122-88-3	10	µg/L	<10	100 µg/L	118	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	118	83.0	137
EP202-SL: Mecoprop	93-65-2	10	µg/L	<10	100 µg/L	112	75.0	143
EP202-SL: MCPA	94-74-6	10	µg/L	<10	100 µg/L	111	76.0	140
EP202-SL: 2.4-DP	120-36-5	10	µg/L	<10	100 µg/L	108	76.0	144
EP202-SL: 2.4-D	94-75-7	10	µg/L	<10	100 µg/L	114	77.0	139
EP202-SL: Triclopyr	55335-06-3	10	µg/L	<10	100 µg/L	102	77.0	141
EP202-SL: Silvex (2.4.5-TP/Fenoprop)	93-72-1	10	µg/L	<10	100 µg/L	105	75.0	143
EP202-SL: 2.4.5-T	93-76-5	10	µg/L	<10	100 µg/L	105	78.0	140
EP202-SL: MCPB	94-81-5	10	µg/L	<10	100 µg/L	110	69.2	139
EP202-SL: Picloram	1918-02-1	10	µg/L	<10	100 µg/L	111	70.0	144
EP202-SL: Clopyralid	1702-17-6	10	µg/L	<10	100 µg/L	109	70.0	145
EP202-SL: Fluroxypyr	69377-81-7	10	µg/L	<10	100 µg/L	111	77.0	145
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3097210)								
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	94.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	89.2	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.8	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	92.8	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	92.4	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	93.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3097210)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	103	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	102	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	91.2	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	94.4	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	92.8	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	103	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	106	69.0	133

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3097210) - continued								
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	104	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	104	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	105	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3097210)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	106	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	119	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	104	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	114	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	99.2	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	104	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	109	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3097210)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	91.2	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	94.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	103	75.2	137

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: 3095160)							
ES2021160-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	80.4	70.0	130
		EG005T: Cadmium	7440-43-9	12.5 mg/kg	99.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	80.5	70.0	130
		EG005T: Copper	7440-50-8	50 mg/kg	97.5	70.0	130
		EG005T: Lead	7439-92-1	50 mg/kg	96.7	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.7	70.0	130
		EG005T: Zinc	7440-66-6	50 mg/kg	99.2	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
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3095161)							
ES2021160-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	83.5	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3090930)							
ES2021240-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	110	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	117	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	93.0	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	94.6	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	89.4	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3090930)							
ES2021240-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	106	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	98.1	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	86.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	91.6	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	74.0	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3090928)							
ES2021240-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	89.8	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	84.4	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3090929)							
ES2021240-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	100.0	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	107	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	112	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3092511)							
ES2021111-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	110	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3090929)							
ES2021240-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	100	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	116	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	101	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3092511)							
ES2021111-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	107	70.0	130
EP080: BTEXN (QCLot: 3092511)							
ES2021111-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	110	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	108	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	112	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	110	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	108	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
EP080: BTEXN (QCLot: 3092511) - continued							
ES2021111-001	Anonymous	EP080: Naphthalene	91-20-3	2.5 mg/kg	76.7	70.0	130
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3092180)							
ES2021111-006	Anonymous	EP202: Mecoprop	93-65-2	0.1 mg/kg	97.4	60.0	140
		EP202: MCPA	94-74-6	0.1 mg/kg	81.9	57.0	143
		EP202: 2.4-D	94-75-7	0.1 mg/kg	84.8	68.0	139
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	97.8	51.0	145
		EP202: 2.4.5-T	93-76-5	0.1 mg/kg	99.0	57.0	142
		EP202: Picloram	1918-02-1	0.1 mg/kg	100	49.0	138
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	94.9	49.0	149
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3095357)							
ES2021234-004	SD12_200617	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	99.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	93.6	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	95.6	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	88.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	108	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	60.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3095357)							
ES2021234-004	SD12_200617	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	87.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	109	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	119	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	94.8	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	124	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	107	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	111	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	129	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	96.4	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	134	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	121	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3095357)							
ES2021234-004	SD12_200617	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	98.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	97.0	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	128	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	85.1	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	114	65.1	134

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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3095357) - continued							
ES2021234-004	SD12_200617	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	113	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	109	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3095357)							
ES2021234-004	SD12_200617	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	106	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	100	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	102	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	74.8	69.2	143

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
EG020F: Dissolved Metals by ICP-MS (QCLot: 3093893)							
ES2021166-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	110	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	94.3	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	81.9	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	70.1	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	87.4	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	89.3	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 3093899)							
ES2021234-023	SW14_200616	EG020A-F: Arsenic	7440-38-2	1 mg/L	86.5	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	88.1	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	92.4	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	89.4	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	98.7	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	87.9	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	88.9	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3093896)							
ES2021166-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	# 65.6	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3093898)							
ES2021234-022	QC103_200616	EG035F: Mercury	7439-97-6	0.01 mg/L	88.5	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3094707)							
ES2021207-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	25 µg/L	75.5	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	111	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3094707)							

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
EP074F: Halogenated Aromatic Compounds (QCLot: 3094707) - continued							
ES2021207-001	Anonymous	EP074: Chlorobenzene	108-90-7	25 µg/L	126	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094704)							
ES2021234-007	SW12_200617	EP080: C6 - C9 Fraction	----	325 µg/L	110	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3094708)							
ES2021207-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	83.0	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094704)							
ES2021234-007	SW12_200617	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	97.2	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3094708)							
ES2021207-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	83.3	70.0	130
EP080: BTEXN (QCLot: 3094704)							
ES2021234-007	SW12_200617	EP080: Benzene	71-43-2	25 µg/L	80.3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	85.7	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	90.8	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	85.7	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	86.5	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	82.5	70.0	130
EP080: BTEXN (QCLot: 3094708)							
ES2021207-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	79.3	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	76.9	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	78.2	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	78.0	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	83.1	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	79.1	70.0	130
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3092715)							
ES2021234-024	SW06_200616	EP202-SL: Mecoprop	93-65-2	100 µg/L	107	75.0	143
		EP202-SL: MCPA	94-74-6	100 µg/L	119	76.0	140
		EP202-SL: 2.4-D	94-75-7	100 µg/L	105	77.0	139
		EP202-SL: Triclopyr	55335-06-3	100 µg/L	104	77.0	141
		EP202-SL: 2.4.5-T	93-76-5	100 µg/L	108	78.0	140
		EP202-SL: Picloram	1918-02-1	100 µg/L	110	70.0	144
		EP202-SL: Clopyralid	1702-17-6	100 µg/L	107	70.0	145

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2021234**

Client	: **EMM CONSULTING PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: DANIEL CONDON	Contact	: Shane Colley
Address	: Ground Floor Suite 1 20 Chandos Street St Leonards NSW NSW 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: dcondon@emmconsulting.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: J200300 Brunslea Park DSI	Page	: 1 of 5
Order number	: ----	Quote number	: EM2020EMGAMM0004 (ME/359/20)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Lachlan Lewis		

Dates

Date Samples Received	: 18-Jun-2020 14:10	Issue Date	: 22-Jun-2020
Client Requested Due Date	: 25-Jun-2020	Scheduled Reporting Date	: **25-Jun-2020**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 3	Temperature	: 2.7'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 34 / 32

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 note that sample QC101_200616 was received with the ID QC100_200616 on the soil jars.**
- **22/06/2020: This is an updated SRN indicating various corrections/changes to this workorder.**
- **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.**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

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

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

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 - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (28 analytes)	SOIL - S-12 OC/OP Pesticides	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2021234-001	17-Jun-2020 00:00	SS03_200617		✓			
ES2021234-002	17-Jun-2020 00:00	SS04_200617		✓			
ES2021234-003	17-Jun-2020 00:00	SS05_200617		✓			
ES2021234-004	17-Jun-2020 00:00	SD12_200617	✓		✓	✓	✓
ES2021234-005	17-Jun-2020 00:00	SD10_200617	✓	✓	✓	✓	✓
ES2021234-006	17-Jun-2020 00:00	SD09_200617	✓		✓	✓	✓
ES2021234-013	16-Jun-2020 00:00	SD14_200616	✓			✓	✓
ES2021234-014	16-Jun-2020 00:00	SD06_200616	✓			✓	✓
ES2021234-015	16-Jun-2020 00:00	SD05_200616	✓	✓		✓	✓
ES2021234-016	16-Jun-2020 00:00	SD04_200616	✓			✓	✓
ES2021234-017	16-Jun-2020 00:00	QC101_200616	✓				

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EP202(solids) Phenoxyacetic acids	SOIL - EP231 (solids) PFAS - Short Suite (12 analytes)	SOIL - S-05 TRH/BTEXN/8 Metals
ES2021234-013	16-Jun-2020 00:00	SD14_200616	✓		
ES2021234-015	16-Jun-2020 00:00	SD05_200616	✓		
ES2021234-016	16-Jun-2020 00:00	SD04_200616	✓		
ES2021234-017	16-Jun-2020 00:00	QC101_200616		✓	✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - W-12 OC/OP Pesticides	WATER - W-26 TRH/BTEXN/PAH/8 Metals
ES2021234-007	17-Jun-2020 00:00	SW12_200617	✓	✓
ES2021234-008	17-Jun-2020 00:00	SW09_200617	✓	✓
ES2021234-009	17-Jun-2020 00:00	MW01_200617	✓	✓
ES2021234-010	17-Jun-2020 00:00	QC302_200617		✓
ES2021234-019	16-Jun-2020 00:00	MW03A_200616	✓	✓
ES2021234-020	16-Jun-2020 00:00	MW03B_200616	✓	✓
ES2021234-021	16-Jun-2020 00:00	MW04_200616	✓	
ES2021234-023	16-Jun-2020 00:00	SW14_200616	✓	✓
ES2021234-024	16-Jun-2020 00:00	SW06_200616	✓	✓
ES2021234-025	16-Jun-2020 00:00	SW05_200616	✓	✓
ES2021234-026	16-Jun-2020 00:00	SW04_200616	✓	✓
ES2021234-028	16-Jun-2020 00:00	QC301_200616		✓
ES2021234-031	15-Jun-2020 00:00	MW02A_200615		✓
ES2021234-032	15-Jun-2020 00:00	QC300_200615		✓

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	WATER - EP066-PCB-WA Polychlorinated Biphenyls (PCB)	WATER - EP074DEFG VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	WATER - EP080 BTEXN	WATER - EP202SL Phenoxyacetic Acid	WATER - EP231-LL PFAS - Short Suite Low Level (12 analytes)	WATER - EP231X-LL PFAS - Full Suite Low Level (29 analytes)	WATER - W-18 TRH(C6 - C9)/BTEXN
ES2021234-007	17-Jun-2020 00:00	SW12_200617						✓	
ES2021234-008	17-Jun-2020 00:00	SW09_200617						✓	
ES2021234-009	17-Jun-2020 00:00	MW01_200617	✓	✓		✓		✓	
ES2021234-010	17-Jun-2020 00:00	QC302_200617					✓		
ES2021234-011	12-Jun-2020 00:00	TB03_200617							✓
ES2021234-012	11-Jun-2020 00:00	TS03_200617			✓				
ES2021234-018	16-Jun-2020 00:00	MW02B_200616						✓	
ES2021234-019	16-Jun-2020 00:00	MW03A_200616				✓		✓	
ES2021234-020	16-Jun-2020 00:00	MW03B_200616	✓	✓		✓		✓	
ES2021234-021	16-Jun-2020 00:00	MW04_200616				✓		✓	
ES2021234-022	16-Jun-2020 00:00	QC103_200616					✓		
ES2021234-023	16-Jun-2020 00:00	SW14_200616				✓		✓	
ES2021234-024	16-Jun-2020 00:00	SW06_200616				✓		✓	
ES2021234-025	16-Jun-2020 00:00	SW05_200616						✓	
ES2021234-026	16-Jun-2020 00:00	SW04_200616						✓	
ES2021234-028	16-Jun-2020 00:00	QC301_200616					✓		

			WATER - EP066-PCB-WA Polychlorinated Biphenyls (PCB)	WATER - EP074DEFG VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	WATER - EP080 BTEXN	WATER - EP202SL Phenoxyacetic Acid	WATER - EP231-LL PFAS - Short Suite Low Level (12 analytes)	WATER - EP231X-LL PFAS - Full Suite Low Level (29 analytes)	WATER - W-18 TRH(C6 - C9)/BTEXN
ES2021234-029	12-Jun-2020 00:00	TB02_200616							✓
ES2021234-031	15-Jun-2020 00:00	MW02A_200615						✓	
ES2021234-032	15-Jun-2020 00:00	QC300_200615					✓		
ES2021234-033	15-Jun-2020 00:00	TB01_200615							✓
ES2021234-034	15-Jun-2020 00:00	TS01_200615			✓				

Matrix: **WATER**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) WATER No analysis requested	WATER - W-05 TRH/BTEXN/8 Metals
ES2021234-018	16-Jun-2020 00:00	MW02B_200616		✓
ES2021234-021	16-Jun-2020 00:00	MW04_200616		✓
ES2021234-022	16-Jun-2020 00:00	QC103_200616		✓
ES2021234-030	16-Jun-2020 00:00	TB02_200616	✓	

Proactive Holding Time Report

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

Requested Deliverables

ALL ESDAT REPORTS

- *AU Certificate of Analysis - NATA (COA)	Email	emmconsulting@esdat.net
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	emmconsulting@esdat.net
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	emmconsulting@esdat.net
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	emmconsulting@esdat.net
- Chain of Custody (CoC) (COC)	Email	emmconsulting@esdat.net
- EDI Format - ESDAT (ESDAT)	Email	emmconsulting@esdat.net
- EDI Format - XTab (XTAB)	Email	emmconsulting@esdat.net

ALL INVOICES

- A4 - AU Tax Invoice (INV)	Email	finance@emmconsulting.com.au

DANIEL CONDON

- *AU Certificate of Analysis - NATA (COA)	Email	dcondon@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	dcondon@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	dcondon@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	dcondon@emmconsulting.com.au
- A4 - AU Tax Invoice (INV)	Email	dcondon@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	dcondon@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	dcondon@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	dcondon@emmconsulting.com.au

Lachlan Lewis

- *AU Certificate of Analysis - NATA (COA)	Email	llewis@emmconsulting.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	llewis@emmconsulting.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	llewis@emmconsulting.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	llewis@emmconsulting.com.au
- Chain of Custody (CoC) (COC)	Email	llewis@emmconsulting.com.au
- EDI Format - ESDAT (ESDAT)	Email	llewis@emmconsulting.com.au
- EDI Format - XTab (XTAB)	Email	llewis@emmconsulting.com.au

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CERTIFICATE OF ANALYSIS 21470

Client Details

Client	EMM
Attention	Daniel Condon
Address	187 Coventry Street, South Melbourne, VIC, 3205

Sample Details

Your Reference	**J200300 - Brunslea Park DSI**
Number of Samples	1 SOIL
Date samples received	17/06/2020
Date completed instructions received	17/06/2020

Analysis Details

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

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

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

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	24/06/2020
Date of Issue	23/06/2020

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Results Approved By
Chris De Luca, Operations Manager

Authorised By

P. Adams.

Pamela Adams, Laboratory Manager

VHC's in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<0.5
trans-1,2-dichloroethene	mg/kg	<0.5
1,1-dichloroethane	mg/kg	<0.5
cis-1,2-dichloroethene	mg/kg	<0.5
bromochloromethane	mg/kg	<0.5
chloroform	mg/kg	<0.5
2,2-dichloropropane	mg/kg	<0.5
1,2-dichloroethane	mg/kg	<0.5
1,1,1-trichloroethane	mg/kg	<0.5
1,1-dichloropropene	mg/kg	<0.5
carbon tetrachloride	mg/kg	<0.5
dibromomethane	mg/kg	<0.5
1,2-dichloropropane	mg/kg	<0.5
trichloroethene	mg/kg	<0.5
bromodichloromethane	mg/kg	<0.5
trans-1,3-dichloropropene	mg/kg	<0.5
cis-1,3-dichloropropene	mg/kg	<0.5
1,1,2-trichloroethane	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<0.5
dibromochloromethane	mg/kg	<0.5
1,2-dibromoethane	mg/kg	<0.5
Tetrachloroethene	mg/kg	<0.5
1,1,1,2-tetrachloroethane	mg/kg	<0.5
chlorobenzene	mg/kg	<0.5
bromoform	mg/kg	<0.5
1,1,2,2-tetrachloroethane	mg/kg	<0.5
1,2,3-trichloropropane	mg/kg	<0.5
bromobenzene	mg/kg	<0.5

VHC's in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
2-chlorotoluene	mg/kg	<0.5
4-chlorotoluene	mg/kg	<0.5
1,3-dichlorobenzene	mg/kg	<0.5
1,4-dichlorobenzene	mg/kg	<0.5
1,2-dichlorobenzene	mg/kg	<0.5
1,2-dibromo-3-chloropropane	mg/kg	<0.5
1,2,4-trichlorobenzene	mg/kg	<0.5
hexachlorobutadiene	mg/kg	<0.5
1,2,3-trichlorobenzene	mg/kg	<0.5
Surrogate Dibromofluoromethane	%	96
Surrogate aaa-Trifluorotoluene	%	86
Surrogate Toluene-d_8	%	99
Surrogate 4-Bromofluorobenzene	%	99

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	84

TRH Soil C10-C40 NEPM		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	20/06/2020
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	180
TRH C_{29} - C_{36}	mg/kg	160
Total +ve TRH (C10-C36)	mg/kg	340
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	270
TRH >C_{34} -C_{40}	mg/kg	170
Total +ve TRH (>C10-C40)	mg/kg	440
Surrogate o-Terphenyl	%	75

PAHs in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	21/06/2020
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.4
Anthracene	mg/kg	0.2
Fluoranthene	mg/kg	1.5
Pyrene	mg/kg	1.8
Benzo(a)anthracene	mg/kg	1.0
Chrysene	mg/kg	1.0
Benzo(b,j&k)fluoranthene	mg/kg	2.4
Benzo(a)pyrene	mg/kg	1.8
Indeno(1,2,3-c,d)pyrene	mg/kg	0.9
Dibenzo(a,h)anthracene	mg/kg	0.2
Benzo(g,h,i)perylene	mg/kg	1.2
Total +ve PAH's	mg/kg	12
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	2.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	2.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	2.5
Surrogate p-Terphenyl-d_{14}	%	102

OCP in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	21/06/2020
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	104

OP in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	21/06/2020
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	104

PCBs in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	21/06/2020
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-fluorobiphenyl	%	98

Acid Extractable metals in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date digested	-	19/06/2020
Date analysed	-	22/06/2020
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	24
Copper	mg/kg	11
Lead	mg/kg	10
Mercury	mg/kg	<0.1
Nickel	mg/kg	15
Zinc	mg/kg	14

Moisture		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date prepared	-	19/06/2020
Date analysed	-	20/06/2020
Moisture	%	18

PFAS in Soil Extended		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date prepared	-	22/06/2020
Date analysed	-	22/06/2020
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon -amide	µg/kg	<1
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ PFOS	%	96
Surrogate $^{13}C_2$ PFOA	%	100
Extracted ISTD $^{13}C_3$ PFBS	%	93
Extracted ISTD $^{18}O_2$ PFHxS	%	90
Extracted ISTD $^{13}C_4$ PFOS	%	93
Extracted ISTD $^{13}C_4$ PFBA	%	55

PFAS in Soil Extended		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Extracted ISTD $^{13}C_3$ *PFPeA*	%	83
Extracted ISTD $^{13}C_2$ *PFHxA*	%	87
Extracted ISTD $^{13}C_4$ *PFHpA*	%	91
Extracted ISTD $^{13}C_4$ *PFOA*	%	87
Extracted ISTD $^{13}C_5$ *PFNA*	%	96
Extracted ISTD $^{13}C_2$ *PFDA*	%	97
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	98
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	80
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	97
Extracted ISTD $^{13}C_8$ *FOSA*	%	98
Extracted ISTD d_3 *N MeFOSA*	%	100
Extracted ISTD d_5 *NEtFOSA*	%	98
Extracted ISTD d_7 *N MeFOSE*	%	102
Extracted ISTD d_9 *N EtFOSE*	%	103
Extracted ISTD d_3 *N MeFOSAA*	%	89
Extracted ISTD d_5 *N EtFOSAA*	%	87
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	104	[NT]
cis-1,2-dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
2,2-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	103	[NT]
1,1,1-trichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
1,1-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
bromodichloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
trans-1,3-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
1,2-dibromoethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	97	[NT]
1,1,1,2-tetrachloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
1,2-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate Toluene-d_8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	92	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	90	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	94	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	86	[NT]	[NT]	[NT]	[NT]	81	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			20/06/2020	[NT]	[NT]	[NT]	[NT]	20/06/2020	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-020	79	[NT]	[NT]	[NT]	[NT]	76	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Naphthalene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Phenanthrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	[NT]	[NT]	[NT]	[NT]	92	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	92	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
alpha-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
gamma-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
delta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Dieldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Endrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Methoxychlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	100	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	100	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Aroclor 1016	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Aroclor 1260	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	98	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Date analysed	-			22/06/2020	[NT]	[NT]	[NT]	[NT]	22/06/2020	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	102	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	121	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	119	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	110	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	94	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	75	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	106	[NT]

Result Definitions

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

Quality Control Definitions

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

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

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PFAS analysed by Envirolab Sydney report number 245295

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CERTIFICATE OF ANALYSIS 21470

Client Details

Client	EMM
Attention	Daniel Condon
Address	187 Coventry Street, South Melbourne, VIC, 3205

Sample Details

Your Reference	**J200300 - Brunslea Park DSI**
Number of Samples	1 SOIL
Date samples received	17/06/2020
Date completed instructions received	17/06/2020

Analysis Details

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

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

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

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	24/06/2020
Date of Issue	08/07/2020
Reissue Details	This report supersedes 21470_R00 due to correction in SVOC results.

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Results Approved By
Chris De Luca, Operations Manager

Authorised By

P. Adams.

Pamela Adams, Laboratory Manager

VHC's in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<0.5
trans-1,2-dichloroethene	mg/kg	<0.5
1,1-dichloroethane	mg/kg	<0.5
cis-1,2-dichloroethene	mg/kg	<0.5
bromochloromethane	mg/kg	<0.5
chloroform	mg/kg	<0.5
2,2-dichloropropane	mg/kg	<0.5
1,2-dichloroethane	mg/kg	<0.5
1,1,1-trichloroethane	mg/kg	<0.5
1,1-dichloropropene	mg/kg	<0.5
carbon tetrachloride	mg/kg	<0.5
dibromomethane	mg/kg	<0.5
1,2-dichloropropane	mg/kg	<0.5
trichloroethene	mg/kg	<0.5
bromodichloromethane	mg/kg	<0.5
trans-1,3-dichloropropene	mg/kg	<0.5
cis-1,3-dichloropropene	mg/kg	<0.5
1,1,2-trichloroethane	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<0.5
dibromochloromethane	mg/kg	<0.5
1,2-dibromoethane	mg/kg	<0.5
Tetrachloroethene	mg/kg	<0.5
1,1,1,2-tetrachloroethane	mg/kg	<0.5
chlorobenzene	mg/kg	<0.5
bromoform	mg/kg	<0.5
1,1,2,2-tetrachloroethane	mg/kg	<0.5
1,2,3-trichloropropane	mg/kg	<0.5
bromobenzene	mg/kg	<0.5

VHC's in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
2-chlorotoluene	mg/kg	<0.5
4-chlorotoluene	mg/kg	<0.5
1,3-dichlorobenzene	mg/kg	<0.5
1,4-dichlorobenzene	mg/kg	<0.5
1,2-dichlorobenzene	mg/kg	<0.5
1,2-dibromo-3-chloropropane	mg/kg	<0.5
1,2,4-trichlorobenzene	mg/kg	<0.5
hexachlorobutadiene	mg/kg	<0.5
1,2,3-trichlorobenzene	mg/kg	<0.5
Surrogate Dibromofluoromethane	%	96
Surrogate aaa-Trifluorotoluene	%	86
Surrogate Toluene-d_8	%	99
Surrogate 4-Bromofluorobenzene	%	99

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	84

TRH Soil C10-C40 NEPM		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	08/07/2020
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	88

PAHs in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	08/07/2020
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d_{14}	%	96

OCP in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	08/07/2020
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	82

OP in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	08/07/2020
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	104

PCBs in Soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date extracted	-	18/06/2020
Date analysed	-	08/07/2020
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-fluorobiphenyl	%	98

Acid Extractable metals in soil		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date digested	-	19/06/2020
Date analysed	-	22/06/2020
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	24
Copper	mg/kg	11
Lead	mg/kg	10
Mercury	mg/kg	<0.1
Nickel	mg/kg	15
Zinc	mg/kg	14

Moisture		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date prepared	-	19/06/2020
Date analysed	-	20/06/2020
Moisture	%	18

PFAS in Soil Extended		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Date prepared	-	22/06/2020
Date analysed	-	22/06/2020
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon -amide	µg/kg	<1
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ PFOS	%	96
Surrogate $^{13}C_2$ PFOA	%	100
Extracted ISTD $^{13}C_3$ PFBS	%	93
Extracted ISTD $^{18}O_2$ PFHxS	%	90
Extracted ISTD $^{13}C_4$ PFOS	%	93
Extracted ISTD $^{13}C_4$ PFBA	%	55

PFAS in Soil Extended		
Our Reference		21470-1
Your Reference	UNITS	QA08
Date Sampled		12/06/2020
Type of sample		SOIL
Extracted ISTD $^{13}C_3$ *PFPeA*	%	83
Extracted ISTD $^{13}C_2$ *PFHxA*	%	87
Extracted ISTD $^{13}C_4$ *PFHpA*	%	91
Extracted ISTD $^{13}C_4$ *PFOA*	%	87
Extracted ISTD $^{13}C_5$ *PFNA*	%	96
Extracted ISTD $^{13}C_2$ *PFDA*	%	97
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	98
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	80
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	97
Extracted ISTD $^{13}C_8$ *FOSA*	%	98
Extracted ISTD d_3 *N MeFOSA*	%	100
Extracted ISTD d_5 *NEtFOSA*	%	98
Extracted ISTD d_7 *N MeFOSE*	%	102
Extracted ISTD d_9 *N EtFOSE*	%	103
Extracted ISTD d_3 *N MeFOSAA*	%	89
Extracted ISTD d_5 *N EtFOSAA*	%	87
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	104	[NT]
cis-1,2-dichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
2,2-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	103	[NT]
1,1,1-trichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
1,1-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
bromodichloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
trans-1,3-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
1,2-dibromoethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	97	[NT]
1,1,1,2-tetrachloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
1,2-dichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate Toluene-d_8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	92	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	90	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	94	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	86	[NT]	[NT]	[NT]	[NT]	81	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			20/06/2020	[NT]	[NT]	[NT]	[NT]	20/06/2020	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-020	79	[NT]	[NT]	[NT]	[NT]	76	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Naphthalene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Phenanthrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	[NT]	[NT]	[NT]	[NT]	92	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	92	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
alpha-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
gamma-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
delta-BHC	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Dieldrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Endrin	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Methoxychlor	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	100	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	100	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
Aroclor 1016	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Aroclor 1260	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	98	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Date analysed	-			22/06/2020	[NT]	[NT]	[NT]	[NT]	22/06/2020	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	102	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	121	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	119	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	110	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	94	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	75	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	106	[NT]

Result Definitions

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

Quality Control Definitions

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

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

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PFAS analysed by Envirolab Sydney report number 245295

Envirolab Services Pty Ltd
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DATA QUALITY ASSESSMENT SUMMARY

Report Details

Envirolab Report Reference	**21470**
Client ID	EMM
Project Reference	J200300 - Brunslea Park DSI
Date Issued	08/07/2020

QC DATA

All laboratory QC data was within the Envirolab Group's specifications.

HOLDING TIME COMPLIANCE EVALUATION

All preservation / holding times (based on AS/ASPHA/ISO/NEPM/USEPA reference documents and standards) are compliant.

Certain analyses have had their recommended technical holding times elongated by filtering and/or freezing on receipt at the laboratory (e.g. BOD, chlorophyll/Pheophytin, nutrients and acid sulphate soil tests).

COMPLIANCE TO QC FREQUENCY (NEPM)

Internal laboratory QC rate complies with NEPM requirements (LCS/MB/MS 1 in 20, Duplicates 1 in 10 samples). Note, samples are batched together with other sample consignments in order to assign QC sample frequency.

QC Evaluation

Duplicate(s) was performed as per NEPM frequency	✓
Laboratory Control Sample(s) were analysed with the samples received	✓
A Method Blank was performed with the samples received	✓
Matrix spike(s) was performed as per NEPM frequency (Not Applicable for Air samples)	✓

Refer to Certificate of Analysis for all Quality Control data.

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SAMPLE RECEIPT ADVICE

Client Details

Client	EMM
Attention	Daniel Condon

Sample Login Details

Your reference	J200300 - Brunslea Park DSI
Envirolab Reference	21470
Date Sample Received	17/06/2020
Date Instructions Received	17/06/2020
Date Results Expected to be Reported	24/06/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 SOIL
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	7.9
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
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Sample ID	VHC's in soil	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil	PFAS in Soil Extended
QA08	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

Additional Info

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

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CERTIFICATE OF ANALYSIS 244865

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon
Address	188 Normanby Rd, SOUTHBANK, VIC, 3006

Sample Details

Your Reference	**J200300, Brunslea Park DSI**
Number of Samples	2 Soil
Date samples received	15/06/2020
Date completed instructions received	15/06/2020

Analysis Details

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

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

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

Report Details

Date results requested by	22/06/2020
Date of Issue	19/06/2020

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Results Approved By
Alexander Mitchell Maclean, Senior Chemist
Dragana Tomas, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor
Josh Williams, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

VHC's in soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	16/06/2020	16/06/2020
Dichlorodifluoromethane	mg/kg	<1	<1
Chloromethane	mg/kg	<1	<1
Vinyl Chloride	mg/kg	<1	<1
Bromomethane	mg/kg	<1	<1
Chloroethane	mg/kg	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1
1,1-dichloroethane	mg/kg	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1
bromochloromethane	mg/kg	<1	<1
chloroform	mg/kg	<1	<1
2,2-dichloropropane	mg/kg	<1	<1
1,2-dichloroethane	mg/kg	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1
1,1-dichloropropene	mg/kg	<1	<1
carbon tetrachloride	mg/kg	<1	<1
dibromomethane	mg/kg	<1	<1
1,2-dichloropropane	mg/kg	<1	<1
trichloroethene	mg/kg	<1	<1
bromodichloromethane	mg/kg	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1
1,3-dichloropropane	mg/kg	<1	<1
dibromochloromethane	mg/kg	<1	<1
1,2-dibromoethane	mg/kg	<1	<1
tetrachloroethene	mg/kg	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1
chlorobenzene	mg/kg	<1	<1
bromoform	mg/kg	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1
bromobenzene	mg/kg	<1	<1

VHC's in soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
2-chlorotoluene	mg/kg	<1	<1
4-chlorotoluene	mg/kg	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1
hexachlorobutadiene	mg/kg	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1
Surrogate Dibromofluorometha	%	105	106
Surrogate aaa-Trifluorotoluene	%	114	108
Surrogate Toluene-d_8	%	124	122
Surrogate 4-Bromofluorobenzene	%	94	95

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	16/06/2020	16/06/2020
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<3	<3
Surrogate aaa-Trifluorotoluene	%	114	108

svTRH (C10-C40) in Soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	75	75

PAHs in Soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	93	107

Organochlorine Pesticides in soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	103	99

Organophosphorus Pesticides in Soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	103	99

PCBs in Soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date extracted	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	103	99

Acid Extractable metals in soil			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date prepared	-	16/06/2020	16/06/2020
Date analysed	-	16/06/2020	16/06/2020
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	25	33
Copper	mg/kg	15	14
Lead	mg/kg	12	12
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	13	12
Zinc	mg/kg	21	16

Moisture			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date prepared	-	16/06/2020	16/06/2020
Date analysed	-	17/06/2020	17/06/2020
Moisture	%	13	15

PFAS in Soils Extended			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Date prepared	-	17/06/2020	17/06/2020
Date analysed	-	17/06/2020	17/06/2020
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.8	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	0.2	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	99	97
Surrogate $^{13}C_2$ *PFOA*	%	89	93
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	93	101
Extracted ISTD $^{13}C_4$ *PFOS*	%	111	114
Extracted ISTD $^{13}C_4$ *PFBA*	%	89	96

PFAS in Soils Extended			
Our Reference		244865-1	244865-2
Your Reference	UNITS	QA02	QA04
Date Sampled		10/06/2020	10/06/2020
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	86	90
Extracted ISTD $^{13}C_2$ *PFHxA*	%	92	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%	99	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	109	107
Extracted ISTD $^{13}C_5$ *PFNA*	%	103	105
Extracted ISTD $^{13}C_2$ *PFDA*	%	87	89
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	97	98
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	80	88
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	65	70
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	92	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	92	98
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	81	81
Extracted ISTD $^{13}C_8$ *FOSA*	%	89	95
Extracted ISTD d_3 *N MeFOSA*	%	85	90
Extracted ISTD d_5 *N EtFOSA*	%	87	92
Extracted ISTD d_7 *N MeFOSE*	%	87	95
Extracted ISTD d_9 *N EtFOSE*	%	98	109
Extracted ISTD d_3 *N MeFOSAA*	%	60	63
Extracted ISTD d_5 *N EtFOSAA*	%	66	68
Total Positive PFHxS & PFOS	µg/kg	0.8	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1
Total Positive PFAS	µg/kg	0.9	<0.1

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	103	96
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	100	91
2,2-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	87	81
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	86	84
1,1-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	75	74
bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	81	79
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	79	78
1,2-dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	103
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	244865-2
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	107	1	105	107	2	106	105
Surrogate aaa-Trifluorotoluene	%		Org-023	121	1	114	113	1	113	102
Surrogate Toluene-d_8	%		Org-023	119	1	124	122	2	114	114
Surrogate 4-Bromofluorobenzene	%		Org-023	97	1	94	94	0	99	97

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	92	88
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	92	88
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	79	76
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	102
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	96	90
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	90	85
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	87	82
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	121	1	114	113	1	113	102

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	109	92
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	91	73
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	94
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	109	92
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	91	73
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	94
Surrogate o-Terphenyl	%		Org-020	78	1	75	80	6	99	83

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	96
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	100
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	112
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	104
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	88
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	114	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	96	1	93	102	9	77	84

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	92
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	98
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	78
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	76
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	80
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	89
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	90
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	78
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	82
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	106	1	103	115	11	113	108

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	118
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	88
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	78
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	80
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	94
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	80
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	84
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	106	1	103	115	11	113	108

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date extracted	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	86	78
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	106	1	103	115	11	113	108

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	244865-2
Date prepared	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Date analysed	-			16/06/2020	1	16/06/2020	16/06/2020		16/06/2020	16/06/2020
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	78
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	105	81
Chromium	mg/kg	1	Metals-020	<1	1	25	31	21	100	84
Copper	mg/kg	1	Metals-020	<1	1	15	16	6	105	89
Lead	mg/kg	1	Metals-020	<1	1	12	12	0	105	82
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	90	99
Nickel	mg/kg	1	Metals-020	<1	1	13	13	0	106	83
Zinc	mg/kg	1	Metals-020	<1	1	21	22	5	106	77

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	244865-2
Date prepared	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
Date analysed	-			17/06/2020	1	17/06/2020	17/06/2020		17/06/2020	17/06/2020
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	94	94
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	108	106
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.8	0.8	0	111	105
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	98
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	123	103
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	104	114
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	110	105
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	103	100
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	0.2	0.2	0	106	104
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	95	95
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	103
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	91	89
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	107	107
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	94	101
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	99	100
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	70	71
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	107	105
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	100	103
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	99	95
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	114	103
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	83	92
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	107	105
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	101	99
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	88	89
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	131	129
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	115	108
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	89	86
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	100	99
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	98	1	99	97	2	97	101
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	87	1	89	92	3	90	97

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	244865-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	102	1	97	96	1	99	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	98	1	93	95	2	96	95
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	115	1	111	113	2	118	108
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	105	1	89	94	5	104	93
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	96	1	86	89	3	93	89
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	103	1	92	96	4	100	94
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	113	1	99	106	7	113	101
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	125	1	109	105	4	120	101
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	123	1	103	103	0	116	103
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	104	1	87	92	6	102	88
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	113	1	97	99	2	113	97
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	104	1	80	85	6	100	88
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	98	1	65	63	3	107	85
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	105	1	92	96	4	102	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	123	1	92	97	5	116	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	131	1	81	90	11	123	84
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	105	1	89	93	4	101	89
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	107	1	85	86	1	101	90
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	115	1	87	86	1	112	91
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	96	1	87	99	13	94	91

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	244865-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	110	1	98	96	2	104	106
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	112	1	60	65	8	102	65
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	117	1	66	65	2	107	69

Result Definitions

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

Quality Control Definitions

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

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

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3/1 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 48 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2 20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5785 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 5735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):
ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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:
YIK LHEONG	TNT		Andy Zhang
DATE/TIME: 11/6/20 9:00	DATE/TIME: 12/6/20 11:10am	DATE/TIME:	DATE/TIME: 15/6 11:10.

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

13.1°C

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 BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEX/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERB	TRH (C6-C9)
1	BH01_0.1	10/6/20	S		2	X	X	X	X	X	X		X	
2	BH01_0.5											X		
3	BH01_1.0									X				
4	BH01_2.0								X					
5	BH01_2.7											X		
6	BH02_0.1									X				
7	BH02_0.5						X		X					
8	BH02_1.0								X					
9	BH02_2.0											X		
10	BH02_2.8									X				
11	QA01						X	X	X	X	X			
12	QA02						X	X	X	X	X			
					TOTAL	1	4	3	6	4	3	3	1	

Subcontract / Forward Lab / Split WO
Lab / Analysis: ENV Rolab
Organised By / Date: QA02, QA04
Relinquished By / Date:
Connote / Courier:
WO No: ES2020331
Attached By: 20 / External Sheet

FORWARD TO ENVIROLAB

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

Job No: 244865
Date Received: 15/6
Time Received: 15:10
Received by: AZ
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Environmental Division Sydney
Work Order Reference
ES2020331

Telephone : + 61-2-8784 8555

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 3 1 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
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☐MACKAY Unit 2/20 Calcifilial Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com
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☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, NH Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☑ Standard TAT (List due date):	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: 20 Chandos St, St Leonards		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300	**ALS QUOTE NO.:** ME/359/20	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: **PURCHASE ORDER NO.:**	**COUNTRY OF ORIGIN:** Australia	COC: 1 (2) 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Daniel Condon	**CONTACT PH:** 0439885614	OF: 1 2 3 4 (5) 6 7	Other comment:
SAMPLER: Daniel Condon and Alex Tennant	**SAMPLER MOBILE:** 0439885614, 0430474184	**RELINQUISHED BY:** YIK CHEONG	**RECEIVED BY:** [illegible]
COC Emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**	DATE/TIME: 11/6/20 9.00	DATE/TIME: 12/6/20 11:[illegible]
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net		**RELINQUISHED BY:** DATE/TIME:	**RECEIVED BY:** DATE/TIME:
Email Invoice to: dcondon@emmconsulting.com.au			

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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP068 solids)	OC/OP Pesticides (S-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	PHENOXYACID HERBICIDES	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
12	BH03_0.1	10/6/20	S		2	X			X	X			X	
13	BH03_0.5									X				
14	BH03_1.0						X		X					
15	BH03_2.0											X		
16	BH03_2.8											X		
17	BH04_0.1					X			X				X	
18	BH04_0.5						X	X	X	X	X			
19	BH04_1.0											X		
20	BH04_2.0									X				
21	BH04_2.8											X		
22	QA03						X	X	X	X	X			
(2) 23	QA04						X	X	X	X	X			FORWARD TO ENVIROLAB
				TOTAL	24	2	4	3	6	4	3	4	2	

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

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

SAMPLE RECEIPT ADVICE

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon

Sample Login Details

Your reference	J200300, Brunslea Park DSI
Envirolab Reference	244865
Date Sample Received	15/06/2020
Date Instructions Received	15/06/2020
Date Results Expected to be Reported	22/06/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.1
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	VHC's in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended
QA02	✓	✓	✓	✓	✓	✓	✓	✓	✓
QA04	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

Additional Info

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

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

CERTIFICATE OF ANALYSIS 244965

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon
Address	188 Normanby Rd, SOUTHBANK, VIC, 3006

Sample Details

Your Reference	**J200300, Brunslea Park DSI**
Number of Samples	1 Soil
Date samples received	16/06/2020
Date completed instructions received	16/06/2020

Analysis Details

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

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

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

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	23/06/2020
Date of Issue	23/06/2020

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

Results Approved By
Alexander Mitchell Maclean, Senior Chemist
Dragana Tomas, Senior Chemist
Hannah Nguyen, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor
Josh Williams, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

VHC's in soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	18/06/2020
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
carbon tetrachloride	mg/kg	<1
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
bromoform	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
bromobenzene	mg/kg	<1

VHC's in soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	102
Surrogate aaa-Trifluorotoluene	%	118
Surrogate Toluene-d_8	%	115
Surrogate 4-Bromofluorobenzene	%	95

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	18/06/2020
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	118

svTRH (C10-C40) in Soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	120
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	120
Surrogate o-Terphenyl	%	96

PAHs in Soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	93

Organochlorine Pesticides in soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Surrogate TCMX	%	90

Organophosphorus Pesticides in Soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
Dichlorvos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Surrogate TCMX	%	90

PCBs in Soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date extracted	-	18/06/2020
Date analysed	-	19/06/2020
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate TCMX	%	90

Acid Extractable metals in soil		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date prepared	-	18/06/2020
Date analysed	-	18/06/2020
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	31
Copper	mg/kg	7
Lead	mg/kg	10
Mercury	mg/kg	<0.1
Nickel	mg/kg	9
Zinc	mg/kg	11

Moisture		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date prepared	-	18/06/2020
Date analysed	-	19/06/2020
Moisture	%	13

PFAS in Soils Extended		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Date prepared	-	18/06/2020
Date analysed	-	18/06/2020
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	101
Surrogate $^{13}C_2$ *PFOA*	%	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	87
Extracted ISTD $^{18}O_2$ *PFHxS*	%	93
Extracted ISTD $^{13}C_4$ *PFOS*	%	95
Extracted ISTD $^{13}C_4$ *PFBA*	%	73

PFAS in Soils Extended		
Our Reference		244965-1
Your Reference	UNITS	QA06
Date Sampled		11/06/2020
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	79
Extracted ISTD $^{13}C_2$ *PFHxA*	%	82
Extracted ISTD $^{13}C_4$ *PFHpA*	%	89
Extracted ISTD $^{13}C_4$ *PFOA*	%	102
Extracted ISTD $^{13}C_5$ *PFNA*	%	115
Extracted ISTD $^{13}C_2$ *PFDA*	%	123
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	121
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	125
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	77
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	86
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	134
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	185
Extracted ISTD $^{13}C_8$ *FOSA*	%	89
Extracted ISTD d_3 *N MeFOSA*	%	77
Extracted ISTD d_5 *N EtFOSA*	%	82
Extracted ISTD d_7 *N MeFOSE*	%	78
Extracted ISTD d_9 *N EtFOSE*	%	79
Extracted ISTD d_3 *N MeFOSAA*	%	110
Extracted ISTD d_5 *N EtFOSAA*	%	139
Total Positive PFHxS & PFOS	µg/kg	0.3
Total Positive PFOS & PFOA	µg/kg	0.3
Total Positive PFAS	µg/kg	0.3

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	80	101
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	83	113
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	83	109
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	72	100
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	70	107
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	75	122
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	72	132
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	118
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VHC's in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	102	115
Surrogate aaa-Trifluorotoluene	%		Org-023	108	[NT]	[NT]	[NT]	[NT]	119	119
Surrogate Toluene-d_8	%		Org-023	112	[NT]	[NT]	[NT]	[NT]	111	97
Surrogate 4-Bromofluorobenzene	%		Org-023	95	[NT]	[NT]	[NT]	[NT]	96	93

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	87	90
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	87	90
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	71	87
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	92	94
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	87
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	89	95
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	83	86
naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	111	[NT]	[NT]	[NT]	[NT]	119	120

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	19/06/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	119	115
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	96	88
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	99
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	119	115
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	96	88
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	99
Surrogate o-Terphenyl	%		Org-020	87	[NT]	[NT]	[NT]	[NT]	79	76

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	19/06/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	94
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	98
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	100
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	100
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	100
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	74
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	108	102
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	95	[NT]	[NT]	[NT]	[NT]	93	89

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	19/06/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	90
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	84
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	96	74
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	96
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	90
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	100
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	94
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	92
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	100	86
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	91	[NT]	[NT]	[NT]	[NT]	89	83

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	19/06/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	122	110
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	102
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	102
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	105	98
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	112	106
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	120
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	108
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	91	[NT]	[NT]	[NT]	[NT]	89	83

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date extracted	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	19/06/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	76	70
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-021	91	[NT]	[NT]	[NT]	[NT]	89	83

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	244965-1
Date prepared	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Date analysed	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	18/06/2020
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	106	71
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	99	74
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	93
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	74
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	73
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	95	73
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	74
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	75

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Date analysed	-			18/06/2020	[NT]	[NT]	[NT]	[NT]	18/06/2020	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	81	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	99	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	110	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	104	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	107	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	82	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	89	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	82	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	73	[NT]	[NT]	[NT]	[NT]	72	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	138	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	82	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions

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

Quality Control Definitions

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

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

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 31 Burma Road Pooraka SA 5095 Ph: 08 8162 5130 E: adelaide@alsglobal.com
☐BRISBANE 2 Byth Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 43 Callemondah Drive Gladstone QLD 4680 Ph: 07 4978 7944 E: ALSEnviro.Gladstone@alsglobal.com
☐MACKAY Unit 2/20 Caterpillar Drive Paget QLD 4740 Ph: 07 4952 5795 E: ALSEnviro.Mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 1/29 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5/585 Maitland Road 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
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☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: ALSEnviro.Townsville@alsglobal.com
☐WOLLONGONG 1/19-21 Ralph Black Drive, Nth Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT: EMM Consulting
OFFICE: 20 Chandos St, St Leonards
PROJECT: Brunslea Park DSI **PROJECT NO.:** J200300
ORDER NUMBER: **PURCHASE ORDER NO.:**
PROJECT MANAGER: Daniel Condon **CONTACT PH:** 0439885614
SAMPLER: Daniel Condon and Alex Tennant **SAMPLER MOBILE:** 0439885614, 0430474184
COC Emailed to ALS? (YES / NO) **EDD FORMAT (or default):**
Email Reports to: dcondon@emmconsulting.com.au, atennant@emmconsulting.com.au, emmconsulting@esdat.net
Email Invoice to: dcondon@emmconsulting.com.au

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):
ALS QUOTE NO.: ME/359/20
COUNTRY OF ORIGIN: Australia

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

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: 12.8 °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
YIK CHEONG	[illegible]		ELS T.Comales
DATE/TIME: 12/6/20 9:00	DATE/TIME: 15/6/20 11:30	DATE/TIME:	DATE/TIME: 16.06.2020 15:07

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).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Asbestos (EA200G)	PFAS - Full Suite (EP231X solids)	PCBs (EP066 solids)	OC/OP Pesticides (G-12)	8 Metals/TRH/BTEXN/PAH (S-26)	Chlorinated hydrocarbons (EP074DEFG solids)	Hold	TRH (C6-C9)	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
37	BH16_1.0	11/6/20	S		2							X		
38	BH16_2.0											X		
39	BH17_0.1						X		X	X				
40	BH17_0.5								X	X				
41	BH17_2.0											X		
42	BH18_0.1					X			X	X				
43	BH18_0.5						X		X	X	X			
44	BH18_2.0											X		
45	QA05						X	X	X	X	X			
(1) x	QA06						X	X	X	X	X			FORWARD TO ENVIROLAB
46	TRIP BLANK 03				1								X	
47	TRIP BLANK 04				1								X	
				TOTAL	24	1	4	2	6	6	3	4	2	

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 244965
Date Received: 16.06.2020
Time Received: 15:07
Received by: TC
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/~~Broken~~/~~None~~

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; LI = Lugols Iodine Preserved Bottles; STT = Sterile Sodium Thiosulfate Preserved Bottles.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon

Sample Login Details

Your reference	J200300, Brunslea Park DSI
Envirolab Reference	244965
Date Sample Received	16/06/2020
Date Instructions Received	16/06/2020
Date Results Expected to be Reported	23/06/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.8
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	VHC's in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	PFAS in Soils Extended
QA06	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

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

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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CERTIFICATE OF ANALYSIS 245159

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon, Lachlan Lewis
Address	188 Normanby Rd, SOUTHBANK, VIC, 3006

Sample Details

Your Reference	**Brunslea Park**
Number of Samples	1 Water, 1 Soil
Date samples received	18/06/2020
Date completed instructions received	18/06/2020

Analysis Details

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

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

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

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	25/06/2020
Date of Issue	25/06/2020

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vTRH(C6-C10)/BTEXN in Soil		
Our Reference		245159-2
Your Reference	UNITS	QC201_200617
Date Sampled		17/06/2020
Type of sample		Soil
Date extracted	-	19/06/2020
Date analysed	-	19/06/2020
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	85

svTRH (C10-C40) in Soil		
Our Reference		245159-2
Your Reference	UNITS	QC201_200617
Date Sampled		17/06/2020
Type of sample		Soil
Date extracted	-	19/06/2020
Date analysed	-	19/06/2020
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	86

Acid Extractable metals in soil		
Our Reference		245159-2
Your Reference	UNITS	QC201_200617
Date Sampled		17/06/2020
Type of sample		Soil
Date prepared	-	19/06/2020
Date analysed	-	22/06/2020
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	21
Copper	mg/kg	18
Lead	mg/kg	16
Mercury	mg/kg	<0.1
Nickel	mg/kg	16
Zinc	mg/kg	29

Moisture		
Our Reference		245159-2
Your Reference	UNITS	QC201_200617
Date Sampled		17/06/2020
Type of sample		Soil
Date prepared	-	19/06/2020
Date analysed	-	22/06/2020
Moisture	%	44

PFAS in Soils Short		
Our Reference		245159-2
Your Reference	UNITS	QC201_200617
Date Sampled		17/06/2020
Type of sample		Soil
Date prepared	-	19/06/2020
Date analysed	-	19/06/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.2
Perfluorooctanesulfonic acid PFOS	µg/kg	4.8
Perfluorooctanoic acid PFOA	µg/kg	<0.2
6:2 FTS	µg/kg	<0.2
8:2 FTS	µg/kg	<0.4
Surrogate $^{13}C_8$ *PFOS*	%	102
Surrogate $^{13}C_2$ *PFOA*	%	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97
Extracted ISTD $^{13}C_4$ *PFOS*	%	98
Extracted ISTD $^{13}C_4$ *PFOA*	%	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	154
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	143
Total Positive PFHxS & PFOS	µg/kg	4.8
Total Positive PFOS & PFOA	µg/kg	4.8
Total Positive PFAS	µg/kg	4.8

vTRH(C6-C10)/BTEXN in Water		
Our Reference		245159-1
Your Reference	UNITS	QC200_200617
Date Sampled		17/06/2020
Type of sample		Water
Date extracted	-	19/06/2020
Date analysed	-	21/06/2020
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	125
Surrogate toluene-d8	%	94
Surrogate 4-BFB	%	102

svTRH (C10-C40) in Water		
Our Reference		245159-1
Your Reference	UNITS	QC200_200617
Date Sampled		17/06/2020
Type of sample		Water
Date extracted	-	22/06/2020
Date analysed	-	23/06/2020
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Surrogate o-Terphenyl	%	96

HM in water - dissolved		
Our Reference		245159-1
Your Reference	UNITS	QC200_200617
Date Sampled		17/06/2020
Type of sample		Water
Date prepared	-	25/06/2020
Date analysed	-	25/06/2020
Arsenic-Dissolved	µg/L	1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	15
Copper-Dissolved	µg/L	<1
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	<1
Zinc-Dissolved	µg/L	17

PFAS in Waters Short		
Our Reference		245159-1
Your Reference	UNITS	QC200_200617
Date Sampled		17/06/2020
Type of sample		Water
Date prepared	-	19/06/2020
Date analysed	-	19/06/2020
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	92
Surrogate $^{13}C_2$ *PFOA*	%	100
Extracted ISTD $^{18}O_2$ *PFHxS*	%	117
Extracted ISTD $^{13}C_4$ *PFOS*	%	108
Extracted ISTD $^{13}C_4$ *PFOA*	%	113
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	70
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOA & PFOS	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
Date analysed	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	2	<25	<25	0	81	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	2	<25	<25	0	81	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	2	<0.2	<0.2	0	82	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	2	<0.5	<0.5	0	86	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	78	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	2	<2	<2	0	83	[NT]
o-Xylene	mg/kg	1	Org-023	<1	2	<1	<1	0	74	[NT]
naphthalene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	117	2	85	102	18	117	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
Date analysed	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	2	<50	<50	0	111	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	2	<100	<100	0	93	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	2	<100	<100	0	108	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	2	<50	<50	0	111	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	2	<100	<100	0	93	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	2	<100	<100	0	108	[NT]
Surrogate o-Terphenyl	%		Org-020	91	2	86	87	1	102	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
Date analysed	-			22/06/2020	2	22/06/2020	22/06/2020		22/06/2020	[NT]
Arsenic	mg/kg	4	Metals-020	<4	2	<4	<4	0	114	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	111	[NT]
Chromium	mg/kg	1	Metals-020	<1	2	21	22	5	108	[NT]
Copper	mg/kg	1	Metals-020	<1	2	18	20	11	107	[NT]
Lead	mg/kg	1	Metals-020	<1	2	16	18	12	105	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	2	<0.1	<0.1	0	87	[NT]
Nickel	mg/kg	1	Metals-020	<1	2	16	17	6	104	[NT]
Zinc	mg/kg	1	Metals-020	<1	2	29	28	4	111	[NT]

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
Date analysed	-			19/06/2020	2	19/06/2020	19/06/2020		19/06/2020	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	2	<0.2	<0.2	0	101	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	2	4.8	3.6	29	103	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	2	<0.2	<0.2	0	97	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	2	<0.2	<0.2	0	93	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	2	<0.4	<0.4	0	122	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	109	2	102	106	4	101	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	96	2	98	98	0	97	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	113	2	97	98	1	112	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	113	2	98	98	0	119	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	101	2	96	99	3	110	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	108	2	154	150	3	138	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	124	2	143	#		114	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W9	[NT]
Date extracted	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Date analysed	-			21/06/2020	[NT]	[NT]	[NT]	[NT]	21/06/2020	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	120	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	120	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	120	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	128	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	127	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	121	[NT]	[NT]	[NT]	[NT]	110	[NT]
Surrogate toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	115	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			22/06/2020	[NT]	[NT]	[NT]	[NT]	22/06/2020	[NT]
Date analysed	-			23/06/2020	[NT]	[NT]	[NT]	[NT]	22/06/2020	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	113	[NT]
Surrogate o-Terphenyl	%		Org-020	111	[NT]	[NT]	[NT]	[NT]	87	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			25/06/2020	[NT]	[NT]	[NT]	[NT]	25/06/2020	[NT]
Date analysed	-			25/06/2020	[NT]	[NT]	[NT]	[NT]	25/06/2020	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	108	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PFAS in Waters Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Date analysed	-			19/06/2020	[NT]	[NT]	[NT]	[NT]	19/06/2020	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	95	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	93	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	115	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	83	[NT]

Result Definitions

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

Quality Control Definitions

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

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

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

PFAS in Soil:
The PQL has been raised due to the high moisture content in sample/s 245159-2 and 2 duplicate, resulting in a high dilution factor.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Services Pty Ltd
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SAMPLE RECEIPT ADVICE

Client Details

Client	EMM Consulting Pty Ltd
Attention	Daniel Condon, Lachlan Lewis

Sample Login Details

Your reference	Brunslea Park
Envirolab Reference	245159
Date Sample Received	18/06/2020
Date Instructions Received	18/06/2020
Date Results Expected to be Reported	25/06/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water, 1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.5
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metalsin soil	PFAS in Soils Short	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	HM in water - dissolved	PFAS in Waters Short
QC200_200617					✓	✓		✓
QC201_200617	✓	✓	✓	✓				

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

Additional Info

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

Appendix L

Analytical results

			BTEX							PFOS/PFOA																							
			Total BTEX	Xylene Total	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL			1	2	1	2	2	2	2	0.005	0.005	0.000005	0.000005	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.002	0.002	0.002	0.002	0.002	0.005	0.002	0.002	0.000002
ADWG 2017 Aesthetic				20		3	25																										
ADWG 2017 Health				600	1	300	800																										
ANZG (2018) Freshwater 95% toxicant DGVs					950				350																								
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay					5,000 | 5,000																												
PFAS NEMP 2020 Drinking Water																																	
PFAS NEMP 2020 Freshwater 99%																																	0.00000023
Field ID	**Location Code**	**Date**																															
MW01_200617	**MW01**	**17/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	**0.009**	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	**0.013**	**0.008**	<0.005	<0.002	<0.002	**0.000003**
MW02A_200615	**MW02A**	**15/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	**0.007**	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	**0.006**	<0.002	<0.005	<0.002	<0.002	<0.000002
MW02B_200616	**MW02B**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.000002
MW03A_200616	**MW03A**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.000002
MW03B_200616	**MW03B**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.000002
MW04_200616	**MW04**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.000002

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

										Phenols		TRH							Chlorinated Hydrocarbons																	
			Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	2,6-D	Picloram	C10-C16	C10-C16 (F2 minus Naphthalene)	C10-C40 (Sum of total)	C16-C34	C34-C40	C6-C10	C6-C10 (F1 minus BTEX)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloroethane	1,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Chloroform	Hexachlorobutadiene
			mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.000002	0.002	0.002	0.005	0.002	0.002	0.002	0.002	0.002	0.01	10	100	100	100	100	100	20	20	5	5	5	5	5	5	5	5	5	5	5	50	50	5	5	5	5
ADWG 2017 Aesthetic																																					
ADWG 2017 Health													300												30	3				3							0.7
ANZG (2018) Freshwater 95% toxicant DGVs																							6,500														
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																																					
PFAS NEMP 2020 Drinking Water			0.00056								0.07																										
PFAS NEMP 2020 Freshwater 99%			0.019																																		
Field ID	**Location Code**	**Date**																																			
MW01_200617	**MW01**	**17/06/2020**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.033**	**0.033**	**0.016**	<0.01	<10	<100	<100	<100	<100	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5
MW02A_200615	**MW02A**	**15/06/2020**	<0.000002	**0.003**	<0.002	<0.005	<0.002	<0.002	**0.016**	**0.013**	**0.006**			<100	<100	**610**	**440**	**170**	<20	<20																	
MW02B_200616	**MW02B**	**16/06/2020**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002			<100	<100	<100	<100	<100	<20	<20																	
MW03A_200616	**MW03A**	**16/06/2020**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<10	<100	<100	<100	<100	<100	<20	<20																	
MW03B_200616	**MW03B**	**16/06/2020**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<10	<100	<100	<100	<100	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5
MW04_200616	**MW04**	**16/06/2020**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<10	**100**	**100**	**100**	<100	<100	<20	<20																	

Environmental Standards
NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

														Halogenated Benzenes										Halogenated Hydrocarbons					Herbicides									
		Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl chloride	1,1,1,2-tetrachloroethane	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,3-dichloropropane	2,2-dichloropropane	Dibromomethane	Hexachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	1,2,3-trichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane	Iodomethane	2,4,5-TP (Silvex)	2,4,5-Trichlorophenoxy Acetic Acid	2,4,6-Trichlorophenoxy-acetic acid	2,4-Dichlorprop	2-Methyl-4-Chlorophenoxy Butanoic Acid	2-Methyl-4-chlorophenoxyacetic acid	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L
EQL		5	5	5	5	50	5	5	5	5	5	5	5	0.5	5	5	5	5	5	5	5	5	5	5	50	50	50	5	0.01	0.01	0.01	0.01	10	10	10	0.01	10	10
ADWG 2017 Aesthetic																1	20	0.3	10																				
ADWG 2017 Health		50				0.3										1,500		40	300					1	1				0.01	0.1		0.1		40			2,000	100
ANZG (2018) Freshwater 95% toxicant DGVs															170	160	260	60		10										0.036								
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																																							
PFAS NEMP 2020 Drinking Water																																							
PFAS NEMP 2020 Freshwater 99%																																							
MW01_200617	**MW01**	**17/06/2020**	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01	<0.01	<10	<10	<10	<0.01	<10	<10
MW02A_200615	**MW02A**	**15/06/2020**																																					
MW02B_200616	**MW02B**	**16/06/2020**																																					
MW03A_200616	**MW03A**	**16/06/2020**												<0.5															<0.01	<0.01	<0.01	<0.01	<10	<10	<10	<0.01	<10	<10
MW03B_200616	**MW03B**	**16/06/2020**	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01	<0.01	<10	<10	<10	<0.01	<10	<10
MW04_200616	**MW04**	**16/06/2020**												<0.5															<0.01	<0.01	<0.01	<0.01	<10	<10	<10	<0.01	<10	<10

Environmental Standards
NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
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HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

					Metals								Organochlorine Pesticides																							
			Fluroxypyr	Hedonal	Mecoprop	Triclopyr	Cadmium (filtered)	Arsenic (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	Heptachlor	Heptachlor epoxide	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Methoxychlor	Aldrin + Dieldrin	chlordane	Endrin ketone
			µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			10	0.01	10	0.01	0.0001	0.001	0.001	0.001	0.001	0.0001	0.001	0.005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5
ADWG 2017 Aesthetic										1				3																								
ADWG 2017 Health				0.03		0.02	0.002	0.01		2	0.01	0.001	0.02										9	0.3									10		0.3	2	
ANZG (2018) Freshwater 95% toxicant DGVs				0.28			0.0002			0.0014	0.0034	0.0006	0.011	0.008									0.01	0.09							0.02		0.2			0.08	
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																																						
PFAS NEMP 2020 Drinking Water																																						
PFAS NEMP 2020 Freshwater 99%																																						
Field ID	**Location Code**	**Date**																																				
MW01_200617	**MW01**	**17/06/2020**	<10	<0.01	<10	<0.01	<0.0001	**0.001**	**0.015**	**0.001**	<0.001	<0.0001	<0.001	**0.015**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
MW02A_200615	**MW02A**	**15/06/2020**					<0.0001	<0.001	<0.001	**0.018**	<0.001	<0.0001	**0.009**	**0.011**																							
MW02B_200616	**MW02B**	**16/06/2020**					<0.0001	**0.002**	**0.004**	<0.001	<0.001	<0.0001	<0.001	**0.009**																							
MW03A_200616	**MW03A**	**16/06/2020**	<10	<0.01	<10	<0.01	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.0001	**0.004**	**0.364**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
MW03B_200616	**MW03B**	**16/06/2020**	<10	<0.01	<10	<0.01	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.0001	**0.004**	**0.515**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
MW04_200616	**MW04**	**16/06/2020**	<10	<0.01	<10	<0.01	<0.0001	<0.001	**0.001**	<0.001	<0.001	<0.0001	**0.248**	**0.150**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5

Environmental Standards
NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Organophosphorous Pesticides														
			Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Azinophos methyl	Bromophos-ethyl	Ethion	Malathion	Dimethoate	Carbophenothion	Chlorfenvinphos	Fenthion	Methyl parathion	Monocrotophos	Prothiofos
			µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	2	0.5
ADWG 2017 Aesthetic																	
ADWG 2017 Health			10		4	5	30	10	4	70	7	0.5	2	7	0.7	2	
ANZG (2018) Freshwater 95% toxicant DGVs			0.01		0.01		0.02			0.05	0.15						
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																	
PFAS NEMP 2020 Drinking Water																	
PFAS NEMP 2020 Freshwater 99%																	
Field ID	**Location Code**	**Date**															
MW01_200617	**MW01**	**17/06/2020**	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5
MW02A_200615	**MW02A**	**15/06/2020**															
MW02B_200616	**MW02B**	**16/06/2020**															
MW03A_200616	**MW03A**	**16/06/2020**	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5
MW03B_200616	**MW03B**	**16/06/2020**	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5
MW04_200616	**MW04**	**16/06/2020**	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5

	PAH																							PCBs	Pesti	
	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Sum of total)	Phenanthrene	Pyrene	PCBs (Sum of total)	Parathion	Demeton-S-methyl
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	0.5	0.0005	0.001	1	1	1	1	1	1	1	0.5	1	1	1	2	0.5
ADWG 2017 Aesthetic																					
ADWG 2017 Health						0.01														20	
ANZG (2018) Freshwater 95% toxicant DGVs	16																			0.004	
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																					
PFAS NEMP 2020 Drinking Water																					
PFAS NEMP 2020 Freshwater 99%																					
MW01_200617	<1.0	<1.0	<1.0	<1.0	<1.0	<0.7	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1	<2.0	<0.5
MW02A_200615	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0			
MW02B_200616	<5																				
MW03A_200616	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0		<2.0	<0.5
MW03B_200616	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1	<2.0	<0.5
MW04_200616	<5																			<2.0	<0.5

Environmental Standards
NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			cides		TPH					VOCs		
			Fenamiphos	Pirimphos-ethyl	+C10-C36 (Sum of total)	C10-C14	C15-C28	C29-C36	C6-C9	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.5	0.5	50	50	100	50	20	5	5	5
ADWG 2017 Aesthetic												
ADWG 2017 Health			0.5	0.5								
ANZG (2018) Freshwater 95% toxicant DGVs												
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay												
PFAS NEMP 2020 Drinking Water												
PFAS NEMP 2020 Freshwater 99%												
Field ID	**Location Code**	**Date**										
MW01_200617	**MW01**	**17/06/2020**	<0.5	<0.5	<50	<50	<100	<50	<20	<5	<5	<5
MW02A_200615	**MW02A**	**15/06/2020**			**560**	<50	**280**	**280**	<20			
MW02B_200616	**MW02B**	**16/06/2020**			<50	<50	<100	<50	<20			
MW03A_200616	**MW03A**	**16/06/2020**	<0.5	<0.5	<50	<50	<100	<50	<20			
MW03B_200616	**MW03B**	**16/06/2020**	<0.5	<0.5	<50	<50	<100	<50	<20	<5	<5	<5
MW04_200616	**MW04**	**16/06/2020**	<0.5	<0.5	<50	<50	<100	<50	<20			

Environmental Standards
NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Asbestos			NA				BTEX							PFOS/PFOA																			
			Asbestos (Trace)	Asbestos fibres	Asbestos Type	Moisture Content	Organic Fibre	Synthetic Mineral Fibre	weight of sample	Total BTEX	Xylene Total	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)
			Fibres	Detect	Detect	%	g/kg	g/kg	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			5			0.1	0.1	0.1	0.01	0.2	0.5	0.2	0.5	0.5	0.5	0.5	0.2	0.1	0.0001	0.0002	0.5	0.2	0.5	0.5	0.2	0.0005	0.0001	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
ANZECC 2000 Sediment ISGC-Low																																				
NEPM 2013 Table 1A(1) HILs Res A Soil																																				
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay											110 | 310 | |	0.7 | 1 | 2 | 3		480 | | |																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi											45	65	125	105																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																																				
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																				
Field ID	**Location Code**	**Date**																																		
SD01	**SD01**	**11/06/2020**				**27.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD02	**SD02**	**11/06/2020**				**28.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	**0.2**	<0.2	<0.2	<0.2	**0.6**	<0.2	<0.2
SD03	**SD03**	**11/06/2020**				**28.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD04_200616	**SD04**	**16/06/2020**				**44.7**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																				
SD05_200616	**SD05**	**16/06/2020**	ND	ND	ND	**22.0**	ND	ND	**338**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																				
SD06_200616	**SD06**	**16/06/2020**				**27.7**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																				
SD07	**SD07**	**11/06/2020**				**35.3**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD08	**SD08**	**11/06/2020**				**26.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD09_200617	**SD09**	**17/06/2020**				**78.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<1.2	<1.2	<0.0012	<0.0012	<3.1	<1.2	<3.1	<3.1	<1.2	<0.0031	<0.0012	<1	<1.2	<1.2	<1.2	<1.2	<1.2	**1.4**	<1.2	<1.2
SD10_200617	**SD10**	**17/06/2020**	ND	ND	ND	**22.7**	ND	ND	**288**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD11	**SD11**	**11/06/2020**				**19.1**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD12_200617	**SD12**	**17/06/2020**				**56.9**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD13	**SD13**	**11/06/2020**				**19.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
SD14_200616	**SD14**	**16/06/2020**				**24.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																				
SS03_200617	**SS03**	**17/06/2020**	ND	ND	ND		Yes	ND	**378**																											
SS04_200617	**SS04**	**17/06/2020**	ND	ND	ND		ND	ND	**352**																											
SS05_200617	**SS05**	**17/06/2020**	ND	ND	ND		ND	ND	**383**																											

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)

														Phenols	TRH																					
			Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)*	Picloram	C10-C16	C10-C16 (F2 minus Naphthalene)	C10-C40 (Sum of total)	C16-C34	C34-C40	C6-C10	C6-C10 (F1 minus BTEX)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloroethane	1,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform
			µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/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
EQL			0.2	0.0001	0.0001	0.1	0.2	0.5	0.2	0.2	0.1	0.2	0.1	0.1	0.02	50	50	50	100	100	10	10	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
ANZECC 2000 Sediment ISGC-Low																																				
NEPM 2013 Table 1A(1) HILs Res A Soil															4,500																					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																	280 | | |					50 | 90 | 150 | 290													
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi																	120		1,300	5,600		180														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																1,000			3,500	10,000	800															
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)					0.1								10|7																						
Field ID	**Location Code**	**Date**																																		
SD01	**SD01**	**11/06/2020**	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2			<50	<50	<50	<100	<100	<10	<10														
SD02	**SD02**	**11/06/2020**	<0.2	**0.0207**	<0.0002	<0.2	**0.3**	<0.5	<0.2	<0.2	**21.8**	**21.6**	**21.3**		<0.04	<50	<50	<50	<100	<100	<10	<10	<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
SD03	**SD03**	**11/06/2020**	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2		<0.02	<50	<50	<50	<100	<100	<10	<10	<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
SD04_200616	**SD04**	**16/06/2020**													<0.02	<50	<50	<50	<100	<100	<10	<10														
SD05_200616	**SD05**	**16/06/2020**													<0.02	<50	<50	<50	<100	<100	<10	<10														
SD06_200616	**SD06**	**16/06/2020**														<50	<50	<50	<100	<100	<10	<10														
SD07	**SD07**	**11/06/2020**	<0.2	**0.0038**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**3.8**	**3.8**	**3.8**		<0.04	<50	<50	**240**	**130**	**110**	<10	<10	<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
SD08	**SD08**	**11/06/2020**	<0.2	**0.0044**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**4.4**	**4.4**	**4.4**		<0.04	<50	<50	**140**	**140**	<100	<10	<10	<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
SD09_200617	**SD09**	**17/06/2020**	<1.2	**0.0432**	<0.0012	<1.2	<1.2	<3.1	<1.2	<1.2	**44.6**	**44.6**	**44.6**			<60	<60	**4,100**	**2,340**	**1,760**	<10	<10														
SD10_200617	**SD10**	**17/06/2020**	<0.2	**0.0021**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**2.1**	**2.1**	**2.1**			<50	<50	<50	<100	<100	<10	<10														
SD11	**SD11**	**11/06/2020**	<0.2	**0.0032**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**3.2**	**3.2**	**3.2**			<50	<50	<50	<100	<100	<10	<10														
SD12_200617	**SD12**	**17/06/2020**	<0.2	**0.0023**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**2.3**	**2.3**	**2.3**			<50	<50	**480**	**280**	**200**	<10	<10														
SD13	**SD13**	**11/06/2020**	<0.2	**0.0009**	<0.0002	<0.2	<0.2	<0.5	<0.2	<0.2	**0.9**	**0.9**	**0.9**			<50	<50	<50	<100	<100	<10	<10														
SD14_200616	**SD14**	**16/06/2020**													<0.02	<50	<50	<50	<100	<100	<10	<10														
SS03_200617	**SS03**	**17/06/2020**																																		
SS04_200617	**SS04**	**17/06/2020**																																		
SS05_200617	**SS05**	**17/06/2020**																																		

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

			Chlorinated Hydrocarbons																	Halogenated Benzenes										Halogenated Hydrocarbons						
			Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Hexachlorobutadiene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl chloride	1,1,1,2-tetrachloroethane	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,3-dichloropropane	2,2-dichloropropane	Bromochloromethane	Dibromomethane	Hexachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	1,2,3-trichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane	Iodomethane	2,4,5-TP (Silvex)	2,4,5-Trichlorophenoxy Acetic Acid
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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			1	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	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.5	0.02	0.02
ANZECC 2000 Sediment ISGC-Low																																				
NEPM 2013 Table 1A(1) HILs Res A Soil																				10																600
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi																																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																																				
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																				
Field ID	**Location Code**	**Date**																																		
SD01	**SD01**	**11/06/2020**																		<0.05																
SD02	**SD02**	**11/06/2020**	<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	<0.5		<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04
SD03	**SD03**	**11/06/2020**	<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	<0.5		<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.02	<0.02
SD04_200616	**SD04**	**16/06/2020**																		<0.05															<0.02	<0.02
SD05_200616	**SD05**	**16/06/2020**																		<0.05															<0.02	<0.02
SD06_200616	**SD06**	**16/06/2020**																		<0.05																
SD07	**SD07**	**11/06/2020**	<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	<0.5		<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04
SD08	**SD08**	**11/06/2020**	<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	<0.5		<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04
SD09_200617	**SD09**	**17/06/2020**																		<0.62																
SD10_200617	**SD10**	**17/06/2020**																		<0.05																
SD11	**SD11**	**11/06/2020**																		<0.05																
SD12_200617	**SD12**	**17/06/2020**																		<0.05																
SD13	**SD13**	**11/06/2020**																		<0.05																
SD14_200616	**SD14**	**16/06/2020**																		<0.05															<0.02	<0.02
SS03_200617	**SS03**	**17/06/2020**																																		
SS04_200617	**SS04**	**17/06/2020**																																		
SS05_200617	**SS05**	**17/06/2020**																																		

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

EMM
creating opportunities

			Herbicides											Metals								Organochlorine Pesticides															
			2,4-Dichlorprop	2-Methyl-4-Chlorophenoxy Butanoic Acid	2-Methyl-4-chlorophenoxyacetic acid	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Fluroxypyr	Hedonal	Mecoprop	Triclopyr	Cadmium	Arsenic	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Heptachlor
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.4	4	1	1	1	0.1	1	1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05
ANZECC 2000 Sediment ISGC-Low														1.5	20	80	65	50	0.15	21	200									0.0016		0.00002				
NEPM 2013 Table 1A(1) HILs Res A Soil				600	600						900	600		20	100	100	6,000	300	40	400	7,400											240					6
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space															100															180						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi																																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																																					
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																					
Field ID	**Location Code**	**Date**																																			
SD01	**SD01**	**11/06/2020**												<1	**7**	**51**	**16**	**11**	<0.1	**15**	**26**	<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
SD02	**SD02**	**11/06/2020**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**11**	**9**	**8**	<0.1	**6**	**16**	<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
SD03	**SD03**	**11/06/2020**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<1	<5	**31**	**13**	**12**	<0.1	**13**	**19**	<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
SD04_200616	**SD04**	**16/06/2020**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<1	**7**	**36**	**20**	**17**	<0.1	**21**	**27**	<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
SD05_200616	**SD05**	**16/06/2020**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<1	**5**	**24**	**15**	**13**	<0.1	**13**	**20**	<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
SD06_200616	**SD06**	**16/06/2020**												<1	**8**	**24**	**15**	**25**	<0.1	**8**	**16**	<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
SD07	**SD07**	**11/06/2020**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**16**	**11**	**12**	<0.1	**9**	**26**	<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
SD08	**SD08**	**11/06/2020**	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	**7**	**70**	**9**	**11**	<0.1	**7**	**16**	<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
SD09_200617	**SD09**	**17/06/2020**												<1	<5	**9**	**21**	**12**	<0.1	**8**	**86**	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<2.5	<0.20	<0.62	<0.62	<0.62	<0.62	<0.62
SD10_200617	**SD10**	**17/06/2020**												<1	<5	**41**	**10**	**11**	<0.1	**9**	**17**	<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
SD11	**SD11**	**11/06/2020**												<1	<5	**26**	**9**	**12**	<0.1	**10**	**14**	<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
SD12_200617	**SD12**	**17/06/2020**												<1	**8**	**32**	**28**	**28**	<0.1	**25**	**46**	<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
SD13	**SD13**	**11/06/2020**												<1	**7**	**42**	**14**	**16**	<0.1	**15**	**17**	<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
SD14_200616	**SD14**	**16/06/2020**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<1	**8**	**16**	**8**	**13**	<0.1	**7**	**16**	<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
SS03_200617	**SS03**	**17/06/2020**																																			
SS04_200617	**SS04**	**17/06/2020**																																			
SS05_200617	**SS05**	**17/06/2020**																																			

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

			Endrin	g-BHC (Lindane)	Heptachlor epoxide	Endrin aldehyde	Methoxychlor	Aldrin + Dieldrin	chlordane	Endosulfan	Endrin ketone	Organophosphorous Pesticides																								
												Azinophos methyl	Chlorpyrifos	Bromophos-ethyl	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Ethion	Dimethoate	Fenitrothion	Malathion	Ronnel	Carbophenothion	Chlorfenvinphos	Fenthion	Methyl parathion	Monocrotophos	Prothiofos	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.1	0.05	0.05	0.05	0.2	0.2	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.5	0.5
ANZECC 2000 Sediment ISGC-Low			0.00002	0.00032					0.0005																					0.16	0.016	0.044	0.085	0.261	0.43		
NEPM 2013 Table 1A(1) HILs Res A Soil			10				300	6	50	270			160																							3	3
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														5 | | |							
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																														170							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi																																			0.7		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																																					
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																					
Field ID	**Location Code**	**Date**																																			
SD01	**SD01**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD02	**SD02**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD03	**SD03**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD04_200616	**SD04**	**16/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD05_200616	**SD05**	**16/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD06_200616	**SD06**	**16/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD07	**SD07**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD08	**SD08**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD09_200617	**SD09**	**17/06/2020**	<0.62	<0.62	<0.62	<0.62	<2.5	<0.20	<0.20	<0.37	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62		<0.62		<0.62	<0.62	<0.62	<2.5	<2.5	<0.62	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.4**	**1.2**
SD10_200617	**SD10**	**17/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD11	**SD11**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD12_200617	**SD12**	**17/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	**1.9**	**1.0**
SD13	**SD13**	**11/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SD14_200616	**SD14**	**16/06/2020**	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**
SS03_200617	**SS03**	**17/06/2020**																																			
SS04_200617	**SS04**	**17/06/2020**																																			
SS05_200617	**SS05**	**17/06/2020**																																			

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

			PAH												PCBs	Pesticides				TPH					VOCs		
			Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Sum of total)	Phenanthrene	Pyrene	PCBs (Sum of total)	Parathion	Demeton-S-methyl	Fenamiphos	Pirimphos-ethyl	+C10-C36 (Sum of total)	C10-C14	C15-C28	C29-C36	C6-C9	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.05	0.05	0.05	50	50	100	100	10	0.5	0.5	0.5
ANZECC 2000 Sediment ISGC-Low							0.384	0.063	0.6	0.019		4	0.24	0.665	0.023												
NEPM 2013 Table 1A(1) HILs Res A Soil			3									300			1												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																											
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soi																											
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi																											
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																											
Field ID	**Location Code**	**Date**																									
SD01	**SD01**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD02	**SD02**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
SD03	**SD03**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
SD04_200616	**SD04**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD05_200616	**SD05**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD06_200616	**SD06**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD07	**SD07**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	**140**	<50	<100	**140**	<10	<0.5	<0.5	<0.5
SD08	**SD08**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	**130**	<50	<100	**130**	<10	<0.5	<0.5	<0.5
SD09_200617	**SD09**	**17/06/2020**	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0		<2.5	<0.62	<0.62	<0.62	**3,450**	<60	**890**	**2,560**	<10			
SD10_200617	**SD10**	**17/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD11	**SD11**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD12_200617	**SD12**	**17/06/2020**	<0.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.5	<0.8	<0.8		<0.2	<0.05	<0.05	<0.05	**380**	<50	**110**	**270**	<10			
SD13	**SD13**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SD14_200616	**SD14**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
SS03_200617	**SS03**	**17/06/2020**																									
SS04_200617	**SS04**	**17/06/2020**																									
SS05_200617	**SS05**	**17/06/2020**																									

Environmental Standards
DoE, 2000, ANZECC 2000 Sediment ISGC-Low
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soi
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

			Asbestos		NA				BTEX							PFOS/PFOA																											
			Asbestos (Trace)	Asbestos fibres	Moisture Content	Organic Fibre	Synthetic Mineral Fibre	weight of sample	Total BTEX	Xylene Total	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)
			Fibres	Detect	%	g/kg	g/kg	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg
EQL			5		0.1	0.1	0.1	0.01	0.2	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.0005	0.0005	0.5	0.2	0.5	0.5	0.2	0.0005	0.0002	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0002	0.0002	0.2	0.2	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil																																											
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay										110 | 310 | |	0.7 | 1 | 2 | 3		480 | | |																														
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																											
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil										45	65	125	105																														
0-2m										45		125																															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																											
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																						0.1				
Field ID	**Location Code**	**Date**																																									
BH01_0.1	**BH01**	**10/06/2020**	ND	ND	**10.6**	ND	ND	**11.5**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	**0.5**	<0.2	<0.2	<0.2	**0.0042**	<0.0002	<0.2	<0.2	<0.5
BH01_1.0	**BH01**	**10/06/2020**			**11.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH01_2.0	**BH01**	**10/06/2020**			**14.4**																																						
BH02_0.1	**BH02**	**10/06/2020**			**10.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH02_0.5	**BH02**	**10/06/2020**			**12.8**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH02_1.0	**BH02**	**10/06/2020**			**10.6**																																						
BH02_2.8	**BH02**	**10/06/2020**			**14.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH03_0.1	**BH03**	**10/06/2020**	ND	ND	**11.2**	ND	ND	**18.3**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH03_0.5	**BH03**	**10/06/2020**			**14.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH03_1.0	**BH03**	**10/06/2020**			**13.0**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH04_0.1	**BH04**	**10/06/2020**	ND	ND	**7.8**	ND	ND	**31.6**																																			
BH04_0.5	**BH04**	**10/06/2020**			**15.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH04_2.0	**BH04**	**10/06/2020**			**14.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH05_0.1	**BH05**	**10/06/2020**	ND	ND	**17.3**	ND	ND	**7.65**								<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH05_0.5	**BH05**	**10/06/2020**			**20.3**																																						
BH05_1.0	**BH05**	**10/06/2020**			**18.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH05_2.0	**BH05**	**10/06/2020**			**16.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH05_2.7	**BH05**	**10/06/2020**			**15.6**																																						
BH06_0.1	**BH06**	**10/06/2020**			**12.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH06_0.5	**BH06**	**10/06/2020**			**16.1**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH06_1.0	**BH06**	**10/06/2020**			**13.2**																																						
BH06_2.0	**BH06**	**10/06/2020**			**15.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH07_0.1	**BH07**	**11/06/2020**			**20.8**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH07_0.5	**BH07**	**11/06/2020**			**17.7**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH07_2.0	**BH07**	**11/06/2020**			**18.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH08_0.1	**BH08**	**11/06/2020**			**11.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH08_0.5	**BH08**	**11/06/2020**			**12.4**																																						
BH08_1.0	**BH08**	**11/06/2020**			**15.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH09_0.1	**BH09**	**11/06/2020**			**11.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH09_0.5	**BH09**	**11/06/2020**			**15.2**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH09_2.0	**BH09**	**11/06/2020**			**14.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH10_0.1	**BH10**	**11/06/2020**			**10.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0002**	<0.0002	<0.2	<0.2	<0.5
BH10_0.5	**BH10**	**11/06/2020**			**11.9**																																						
BH10_2.8	**BH10**	**11/06/2020**			**16.3**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH11_0.1	**BH11**	**11/06/2020**			**9.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH11_0.5	**BH11**	**11/06/2020**			**17.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH12_0.1	**BH12**	**11/06/2020**			**14.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH12_0.5	**BH12**	**11/06/2020**			**11.3**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH12_1.0	**BH12**	**11/06/2020**			**12.4**																																						
BH13_0.1	**BH13**	**11/06/2020**			**10.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH13_0.5	**BH13**	**11/06/2020**			**8.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH14_0.1	**BH14**	**11/06/2020**			**7.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0006**	<0.0002	<0.2	<0.2	<0.5
BH14_0.5	**BH14**	**11/06/2020**			**6.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH15_0.1	**BH15**	**11/06/2020**			**12.9**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0004**	<0.0002	<0.2	<0.2	<0.5
BH15_0.5	**BH15**	**11/06/2020**			**13.8**																																						
BH15_1.0	**BH15**	**11/06/2020**			**14.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH16_0.1	**BH16**	**11/06/2020**			**11.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH16_0.5	**BH16**	**11/06/2020**			**14.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH17_2.0	**BH17**	**11/06/2020**			**16.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
BH18_0.1	**BH18**	**11/06/2020**			**3.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
BH18_0.5	**BH18**	**11/06/2020**			**15.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW01_0.05	**MW01**	**13/06/2020**			**11.5**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0010**	<0.0002	<0.2	<0.2	<0.5
MW01_0.9	**MW01**	**13/06/2020**			**12.5**																																						
MW01_2.0	**MW01**	**13/06/2020**			**16.2**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
MW01_3.0	**MW01**	**13/06/2020**			**14.7**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW02A_0.05	**MW02A**	**12/06/2020**	ND	ND	**11.2**	**Yes**	ND	**45.1**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	**0.5**	<0.2	<0.2	<0.2	**0.0010**	<0.0002	<0.2	<0.2	<0.5
MW02A_1.0	**MW02A**	**12/06/2020**			**11.0**																																						
MW02A_13.9	**MW02A**	**12/06/2020**			**23.4**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW02B_13.65	**MW02B**	**11/06/2020**			**4.0**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW03A_0.1	**MW03A**	**9/06/2020**			**11.6**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0003**	<0.0002	<0.2	<0.2	<0.5
MW03A_0.5	**MW03A**	**9/06/2020**			**19.1**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
MW03A_1.0	**MW03A**	**9/06/2020**			**13.7**																																						
MW03A_2.0	**MW03A**	**9/06/2020**			**16.8**																																						
MW04_0.1	**MW04**	**13/06/2020**	ND	ND	**12.8**	**Yes**	ND	**45.0**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW04_0.5	**MW04**	**13/06/2020**			**19.4**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											
MW05_0.1	**MW05**	**12/06/2020**	ND	ND	**11.3**	**Yes**	ND	**45.7**	<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW05_0.5	**MW05**	**12/06/2020**			**16.7**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW06_0.1	**MW06**	**12/06/2020**			**11.8**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.0004**	<0.0002	<0.2	<0.2	<0.5
MW06_0.5	**MW06**	**12/06/2020**			**9.4**											<0.5	<0.5	<0.0005	<0.0005	<0.5	<0.2	<0.5	<0.5	<0.2	<0.0005	<0.0002	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0002	<0.0002	<0.2	<0.2	<0.5
MW06_1.0	**MW06**	**12/06/2020**			**11.3**				<0.2	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5																											

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil

HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)

							Phenols	TRH							Chlorinated Hydrocarbons																									
			Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Picloram	C10-C16	C10-C16 (F2 minus Naphthalene)	C10-C40 (Sum of total)	C16-C34	C34-C40	C6-C10	C6-C10 (F1 minus BTEX)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloroethane	1,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloromethane	cis-1,2-dichloroethene	Chloroform	cis-1,3-dichloropropene	Hexachlorobutadiene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene	Vinyl chloride	1,1,1,2-tetrachloroethane	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane
			µg/kg	µg/kg	µg/kg	µg/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
EQL			0.2	0.2	0.2	0.2	0.2	0.02	50	50	50	100	100	10	10	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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
NEPM 2013 Table 1A(1) HILs Res A Soil								4,500																																
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay										280 | | |				50 | 90 | 150 | 290																									
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil 0-2m										120		1,300	5,600		180																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil									1,000			3,500	10,000	800																										
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)							10																																	
Field ID	**Location Code**	**Date**																																						
BH01_0.1	**BH01**	**10/06/2020**	<0.2	<0.2	**4.7**	**4.7**	**4.7**	<0.04	<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH01_1.0	**BH01**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH01_2.0	**BH01**	**10/06/2020**																																							
BH02_0.1	**BH02**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH02_0.5	**BH02**	**10/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
BH02_1.0	**BH02**	**10/06/2020**																																							
BH02_2.8	**BH02**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH03_0.1	**BH03**	**10/06/2020**						<0.04	<50	<50	<50	<100	<100	<10	<10																										
BH03_0.5	**BH03**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH03_1.0	**BH03**	**10/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
BH04_0.1	**BH04**	**10/06/2020**						<0.04																																
BH04_0.5	**BH04**	**10/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH04_2.0	**BH04**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH05_0.1	**BH05**	**10/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
BH05_0.5	**BH05**	**10/06/2020**																																							
BH05_1.0	**BH05**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH05_2.0	**BH05**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH05_2.7	**BH05**	**10/06/2020**														<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH06_0.1	**BH06**	**10/06/2020**						<0.04	<50	<50	<50	<100	<100	<10	<10																										
BH06_0.5	**BH06**	**10/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2									<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH06_1.0	**BH06**	**10/06/2020**																																							
BH06_2.0	**BH06**	**10/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH07_0.1	**BH07**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
BH07_0.5	**BH07**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH07_2.0	**BH07**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH08_0.1	**BH08**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.04	<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH08_0.5	**BH08**	**11/06/2020**																																							
BH08_1.0	**BH08**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH09_0.1	**BH09**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH09_0.5	**BH09**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
BH09_2.0	**BH09**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH10_0.1	**BH10**	**11/06/2020**	<0.2	<0.2	**0.2**	**0.2**	**0.2**		<50	<50	<50	<100	<100	<10	<10																										
BH10_0.5	**BH10**	**11/06/2020**																																							
BH10_2.8	**BH10**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH11_0.1	**BH11**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.04	<50	<50	<50	<100	<100	<10	<10																										
BH11_0.5	**BH11**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH12_0.1	**BH12**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH12_0.5	**BH12**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH12_1.0	**BH12**	**11/06/2020**																																							
BH13_0.1	**BH13**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.04	<50	<50	<50	<100	<100	<10	<10																										
BH13_0.5	**BH13**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH14_0.1	**BH14**	**11/06/2020**	<0.2	<0.2	**0.6**	**0.6**	**0.6**		<50	<50	<50	<100	<100	<10	<10																										
BH14_0.5	**BH14**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH15_0.1	**BH15**	**11/06/2020**	<0.2	<0.2	**0.4**	**0.4**	**0.4**	<0.04	<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH15_0.5	**BH15**	**11/06/2020**																																							
BH15_1.0	**BH15**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH16_0.1	**BH16**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
BH16_0.5	**BH16**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH17_2.0	**BH17**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10																										
BH18_0.1	**BH18**	**11/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
BH18_0.5	**BH18**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
MW01_0.05	**MW01**	**13/06/2020**	<0.2	<0.2	**1.0**	**1.0**	**1.0**		<50	<50	<50	<100	<100	<10	<10																										
MW01_0.9	**MW01**	**13/06/2020**																																							
MW01_2.0	**MW01**	**13/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
MW01_3.0	**MW01**	**13/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
MW02A_0.05	**MW02A**	**12/06/2020**	<0.2	<0.2	**1.5**	**1.5**	**1.5**	<0.02	<50	<50	<50	<100	<100	<10	<10																										
MW02A_1.0	**MW02A**	**12/06/2020**														<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
MW02A_13.9	**MW02A**	**12/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
MW02B_13.65	**MW02B**	**11/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10																										
MW03A_0.1	**MW03A**	**9/06/2020**	<0.2	<0.2	**0.3**	**0.3**	**0.3**		<50	<50	<50	<100	<100	<10	<10																										
MW03A_0.5	**MW03A**	**9/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
MW03A_1.0	**MW03A**	**9/06/2020**																																							
MW03A_2.0	**MW03A**	**9/06/2020**																																							
MW04_0.1	**MW04**	**13/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<50	<50	<50	<100	<100	<10	<10																										
MW04_0.5	**MW04**	**13/06/2020**							<50	<50	<50	<100	<100	<10	<10																										
MW05_0.1	**MW05**	**12/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.02	<50	<50	<50	<100	<100	<10	<10																										
MW05_0.5	**MW05**	**12/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2		<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
MW06_0.1	**MW06**	**12/06/2020**	<0.2	<0.2	**0.4**	**0.4**	**0.4**		<50	<50	<50	<100	<100	<10	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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
MW06_0.5	**MW06**	**12/06/2020**	<0.2	<0.2	<0.2	<0.2	<0.2																																	
MW06_1.0	**MW06**	**12/06/2020**							<50	<50	<50	<100	<100	<10	<10																										

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil

HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A

						Halogenated Benzenes									Halogenated Hydrocarbons					Herbicides													Metals								
			1,3-dichloropropane	2,2-dichloropropane	Dibromomethane	Hexachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	1,2,3-trichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane	Iodomethane	2,4,5-TP (Silvex)	2,4,5-Trichlorophenoxy Acetic Acid	2,4-Dichlorprop	2-Methyl-4-Chlorophenoxy Butanoic Acid	2-Methyl-4-chlorophenoxyacetic acid	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Fluroxypyr	Hedonal	Mecoprop	Triclopyr	Cadmium	Arsenic	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	4,4-DDE
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	5	5	0.5	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	1	5	2	5	5	0.1	2	5	0.05
NEPM 2013 Table 1A(1) HILs Res A Soil						10																600		600	600						900	600		20	100	100	6,000	300	40	400	7,400	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																										
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																			100							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil 0-2m																																										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																										
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																										
Field ID	**Location Code**	**Date**																																							
BH01_0.1	**BH01**	**10/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**26**	**6**	**11**	<0.1	**9**	**12**	<0.05
BH01_1.0	**BH01**	**10/06/2020**																																<1	<5	**28**	**15**	**12**	<0.1	**12**	**22**	
BH01_2.0	**BH01**	**10/06/2020**				<0.05																																				<0.05
BH02_0.1	**BH02**	**10/06/2020**																																<1	<5	**15**	**5**	**8**	<0.1	**5**	**7**	
BH02_0.5	**BH02**	**10/06/2020**				<0.05																																				<0.05
BH02_1.0	**BH02**	**10/06/2020**				<0.05																																				<0.05
BH02_2.8	**BH02**	**10/06/2020**																																<1	<5	**18**	**15**	**11**	<0.1	**15**	**13**	
BH03_0.1	**BH03**	**10/06/2020**				<0.05															<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**34**	**7**	**11**	<0.1	**11**	**9**	<0.05
BH03_0.5	**BH03**	**10/06/2020**																																<1	<5	**26**	**17**	**14**	<0.1	**11**	**10**	
BH03_1.0	**BH03**	**10/06/2020**				<0.05																																				<0.05
BH04_0.1	**BH04**	**10/06/2020**				<0.05															<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04									<0.05
BH04_0.5	**BH04**	**10/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5														<1	<5	**29**	**16**	**12**	<0.1	**11**	**12**	<0.05
BH04_2.0	**BH04**	**10/06/2020**																																<1	<5	**24**	**14**	**11**	<0.1	**12**	**13**	
BH05_0.1	**BH05**	**10/06/2020**				<0.05																																				<0.05
BH05_0.5	**BH05**	**10/06/2020**																																								
BH05_1.0	**BH05**	**10/06/2020**				<0.05																												<1	<5	**29**	**16**	**12**	<0.1	**16**	**16**	<0.05
BH05_2.0	**BH05**	**10/06/2020**																																<1	<5	**19**	**11**	**12**	<0.1	**11**	**9**	
BH05_2.7	**BH05**	**10/06/2020**	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5																						
BH06_0.1	**BH06**	**10/06/2020**																			<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**37**	**6**	**11**	<0.1	**7**	**7**	
BH06_0.5	**BH06**	**10/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5																						<0.05
BH06_1.0	**BH06**	**10/06/2020**				<0.05																																				<0.05
BH06_2.0	**BH06**	**10/06/2020**																																<1	<5	**25**	**12**	**11**	<0.1	**11**	**14**	
BH07_0.1	**BH07**	**11/06/2020**				<0.05																																				<0.05
BH07_0.5	**BH07**	**11/06/2020**				<0.05																												<1	<5	**29**	**16**	**11**	<0.1	**18**	**24**	<0.05
BH07_2.0	**BH07**	**11/06/2020**																																<1	<5	**33**	**11**	**10**	<0.1	**14**	**34**	
BH08_0.1	**BH08**	**11/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	**8**	**58**	**12**	**16**	<0.1	**18**	**14**	<0.05
BH08_0.5	**BH08**	**11/06/2020**				<0.05																																				<0.05
BH08_1.0	**BH08**	**11/06/2020**																																<1	**6**	**47**	**17**	**14**	<0.1	**27**	**21**	
BH09_0.1	**BH09**	**11/06/2020**				<0.05																												<1	<5	**39**	**7**	**20**	<0.1	**12**	**9**	<0.05
BH09_0.5	**BH09**	**11/06/2020**				<0.05																																				<0.05
BH09_2.0	**BH09**	**11/06/2020**																																<1	<5	**51**	**16**	**11**	<0.1	**18**	**23**	
BH10_0.1	**BH10**	**11/06/2020**				<0.05																												<1	<5	**18**	**8**	**12**	<0.1	**10**	**12**	<0.05
BH10_0.5	**BH10**	**11/06/2020**				<0.05																																				<0.05
BH10_2.8	**BH10**	**11/06/2020**																																<1	<5	**28**	**16**	**13**	<0.1	**23**	**28**	
BH11_0.1	**BH11**	**11/06/2020**				<0.05															<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**37**	**11**	**12**	<0.1	**15**	**15**	<0.05
BH11_0.5	**BH11**	**11/06/2020**				<0.05																												<1	**6**	**48**	**21**	**14**	<0.1	**32**	**26**	<0.05
BH12_0.1	**BH12**	**11/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<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	<1	<5	**37**	**22**	**13**	<0.1	**17**	**26**	<0.05
BH12_0.5	**BH12**	**11/06/2020**				<0.05																												<1	<5	**50**	**13**	**9**	<0.1	**9**	**14**	<0.05
BH12_1.0	**BH12**	**11/06/2020**																																								
BH13_0.1	**BH13**	**11/06/2020**				<0.05															<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**15**	**7**	**10**	<0.1	**6**	**13**	<0.05
BH13_0.5	**BH13**	**11/06/2020**				<0.05																												<1	<5	**23**	**13**	**10**	<0.1	**9**	**26**	<0.05
BH14_0.1	**BH14**	**11/06/2020**				<0.05																												<1	<5	**13**	**7**	**8**	<0.1	**10**	**15**	<0.05
BH14_0.5	**BH14**	**11/06/2020**				<0.05																												<1	<5	**13**	**5**	**8**	<0.1	**5**	**9**	<0.05
BH15_0.1	**BH15**	**11/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<5	**28**	**10**	**14**	<0.1	**12**	**14**	<0.05
BH15_0.5	**BH15**	**11/06/2020**				<0.05																																				<0.05
BH15_1.0	**BH15**	**11/06/2020**																																<1	<5	**29**	**19**	**12**	<0.1	**20**	**28**	
BH16_0.1	**BH16**	**11/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5														<1	<5	**33**	**11**	**12**	<0.1	**18**	**13**	<0.05
BH16_0.5	**BH16**	**11/06/2020**				<0.05																												<1	<5	**32**	**19**	**11**	<0.1	**31**	**21**	<0.05
BH17_2.0	**BH17**	**11/06/2020**				<0.05																												<1	<5	**39**	**22**	**14**	<0.1	**19**	**27**	<0.05
BH18_0.1	**BH18**	**11/06/2020**				<0.05																												<1	<5	**30**	<5	**7**	<0.1	**4**	**6**	<0.05
BH18_0.5	**BH18**	**11/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5														<1	**6**	**45**	**25**	**14**	<0.1	**19**	**29**	<0.05
MW01_0.05	**MW01**	**13/06/2020**				<0.05																												<1	<5	**20**	**8**	**10**	<0.1	**11**	**15**	<0.05
MW01_0.9	**MW01**	**13/06/2020**				<0.05																																				<0.05
MW01_2.0	**MW01**	**13/06/2020**																																<1	**6**	**36**	**19**	**12**	<0.1	**20**	**33**	
MW01_3.0	**MW01**	**13/06/2020**																																								
MW02A_0.05	**MW02A**	**12/06/2020**				<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	<1	<5	**16**	**7**	**10**	<0.1	**7**	**12**	<0.05
MW02A_1.0	**MW02A**	**12/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5																						<0.05
MW02A_13.9	**MW02A**	**12/06/2020**																																								
MW02B_13.65	**MW02B**	**11/06/2020**																																<1	<5	**11**	<5	**5**	<0.1	**6**	**9**	
MW03A_0.1	**MW03A**	**9/06/2020**																																<1	<5	**20**	**6**	**10**	<0.1	**6**	**8**	
MW03A_0.5	**MW03A**	**9/06/2020**																																<1	<5	**35**	**18**	**13**	<0.1	**11**	**17**	
MW03A_1.0	**MW03A**	**9/06/2020**				<0.05																																				<0.05
MW03A_2.0	**MW03A**	**9/06/2020**																																								
MW04_0.1	**MW04**	**13/06/2020**				<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	<1	<5	**32**	**9**	**11**	<0.1	**9**	**15**	<0.05
MW04_0.5	**MW04**	**13/06/2020**				<0.05																												<1	**5**	**32**	**21**	**14**	<0.1	**20**	**29**	<0.05
MW05_0.1	**MW05**	**12/06/2020**				<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	<1	**6**	**39**	**8**	**13**	<0.1	**13**	**15**	<0.05
MW05_0.5	**MW05**	**12/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5														<1	**6**	**66**	**13**	**12**	<0.1	**26**	**18**	<0.05
MW06_0.1	**MW06**	**12/06/2020**	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5														<1	**7**	**62**	**8**	**15**	<0.1	**12**	**14**	<0.05
MW06_0.5	**MW06**	**12/06/2020**				<0.05																																				<0.05
MW06_1.0	**MW06**	**12/06/2020**																																<1	<5	**30**	**16**	**16**	<0.1	**20**	**22**	

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil

HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A

			Organochlorine Pesticides																							Organophosphorous Pesticides																
			a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Heptachlor	Endosulfan I	Heptachlor epoxide	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Methoxychlor	Aldrin + Dieldrin	chlordane	Endosulfan	Endrin ketone	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Azinophos methyl	Dichlorvos	Bromophos-ethyl	Ethion	Malathion	Dimethoate	Carbophenothion	Chlorfenvinphos	Fenthion	Methyl parathion	Monocrotophos	Prothiofos	Naphthalene	Acenaphthene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	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	0.05	0.05	0.2	0.2	0.05	0.5	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil											240		6					10			300	6	50	270		160																	
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																									5 | | |	
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space										180																															170	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil 0-2m																																										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																										
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																										
Field ID	**Location Code**	**Date**																																								
BH01_0.1	**BH01**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH01_1.0	**BH01**	**10/06/2020**																																							<0.5	<0.5
BH01_2.0	**BH01**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH02_0.1	**BH02**	**10/06/2020**																																							<0.5	<0.5
BH02_0.5	**BH02**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH02_1.0	**BH02**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH02_2.8	**BH02**	**10/06/2020**																																							<0.5	<0.5
BH03_0.1	**BH03**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH03_0.5	**BH03**	**10/06/2020**																																							<0.5	<0.5
BH03_1.0	**BH03**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH04_0.1	**BH04**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH04_0.5	**BH04**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH04_2.0	**BH04**	**10/06/2020**																																							<0.5	<0.5
BH05_0.1	**BH05**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH05_0.5	**BH05**	**10/06/2020**																																								
BH05_1.0	**BH05**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH05_2.0	**BH05**	**10/06/2020**																																							<0.5	<0.5
BH05_2.7	**BH05**	**10/06/2020**																																								
BH06_0.1	**BH06**	**10/06/2020**																																							<0.5	<0.5
BH06_0.5	**BH06**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH06_1.0	**BH06**	**10/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH06_2.0	**BH06**	**10/06/2020**																																							<0.5	<0.5
BH07_0.1	**BH07**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH07_0.5	**BH07**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH07_2.0	**BH07**	**11/06/2020**																																							<0.5	<0.5
BH08_0.1	**BH08**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH08_0.5	**BH08**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH08_1.0	**BH08**	**11/06/2020**																																							<0.5	<0.5
BH09_0.1	**BH09**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH09_0.5	**BH09**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH09_2.0	**BH09**	**11/06/2020**																																							<0.5	<0.5
BH10_0.1	**BH10**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH10_0.5	**BH10**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH10_2.8	**BH10**	**11/06/2020**																																							<0.5	<0.5
BH11_0.1	**BH11**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH11_0.5	**BH11**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH12_0.1	**BH12**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH12_0.5	**BH12**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH12_1.0	**BH12**	**11/06/2020**																																								
BH13_0.1	**BH13**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH13_0.5	**BH13**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH14_0.1	**BH14**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH14_0.5	**BH14**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH15_0.1	**BH15**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH15_0.5	**BH15**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
BH15_1.0	**BH15**	**11/06/2020**																																							<0.5	<0.5
BH16_0.1	**BH16**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH16_0.5	**BH16**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH17_2.0	**BH17**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH18_0.1	**BH18**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
BH18_0.5	**BH18**	**11/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW01_0.05	**MW01**	**13/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW01_0.9	**MW01**	**13/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
MW01_2.0	**MW01**	**13/06/2020**																																							<0.5	<0.5
MW01_3.0	**MW01**	**13/06/2020**																																								
MW02A_0.05	**MW02A**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW02A_1.0	**MW02A**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
MW02A_13.9	**MW02A**	**12/06/2020**																																								
MW02B_13.65	**MW02B**	**11/06/2020**																																							<0.5	<0.5
MW03A_0.1	**MW03A**	**9/06/2020**																																							<0.5	<0.5
MW03A_0.5	**MW03A**	**9/06/2020**																																							<0.5	<0.5
MW03A_1.0	**MW03A**	**9/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
MW03A_2.0	**MW03A**	**9/06/2020**																																								
MW04_0.1	**MW04**	**13/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW04_0.5	**MW04**	**13/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW05_0.1	**MW05**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW05_0.5	**MW05**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW06_0.1	**MW06**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5
MW06_0.5	**MW06**	**12/06/2020**	<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	<0.2	<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	<0.05	<0.05	<0.2	<0.2	<0.05		
MW06_1.0	**MW06**	**12/06/2020**																																							<0.5	<0.5

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil

HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A

			PAH																		PCBs	Pesticides				TPH					VOCs		
			Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo[b+j]fluoranthene	Benzo(g,h,i)perylene	Benzo[k]fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Sum of total)	Phenanthrene	Pyrene	PCBs (Sum of total)	Parathion	Demeton-S-methyl	Fenamiphos	Pirimphos-ethyl	+C10-C36 (Sum of total)	C10-C14	C15-C28	C29-C36	C6-C9	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.2	0.05	0.05	0.05	50	50	100	100	10	0.5	0.5	0.5
NEPM 2013 Table 1A(1) HILs Res A Soil							3	3	3									300			1												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																																	
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																																	
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil						0.7																											
0-2m						0.7																											
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																																	
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)																																	
Field ID	**Location Code**	**Date**																															
BH01_0.1	**BH01**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH01_1.0	**BH01**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH01_2.0	**BH01**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH02_0.1	**BH02**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH02_0.5	**BH02**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH02_1.0	**BH02**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH02_2.8	**BH02**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH03_0.1	**BH03**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH03_0.5	**BH03**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH03_1.0	**BH03**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH04_0.1	**BH04**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH04_0.5	**BH04**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH04_2.0	**BH04**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH05_0.1	**BH05**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH05_0.5	**BH05**	**10/06/2020**																			<0.1												
BH05_1.0	**BH05**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH05_2.0	**BH05**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH05_2.7	**BH05**	**10/06/2020**																													<0.5	<0.5	<0.5
BH06_0.1	**BH06**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH06_0.5	**BH06**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05						<0.5	<0.5	<0.5
BH06_1.0	**BH06**	**10/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH06_2.0	**BH06**	**10/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH07_0.1	**BH07**	**11/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH07_0.5	**BH07**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH07_2.0	**BH07**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH08_0.1	**BH08**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH08_0.5	**BH08**	**11/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH08_1.0	**BH08**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH09_0.1	**BH09**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH09_0.5	**BH09**	**11/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH09_2.0	**BH09**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH10_0.1	**BH10**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH10_0.5	**BH10**	**11/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH10_2.8	**BH10**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH11_0.1	**BH11**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH11_0.5	**BH11**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH12_0.1	**BH12**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH12_0.5	**BH12**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH12_1.0	**BH12**	**11/06/2020**																			<0.1												
BH13_0.1	**BH13**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH13_0.5	**BH13**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH14_0.1	**BH14**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH14_0.5	**BH14**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH15_0.1	**BH15**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH15_0.5	**BH15**	**11/06/2020**																				<0.2	<0.05	<0.05	<0.05								
BH15_1.0	**BH15**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
BH16_0.1	**BH16**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
BH16_0.5	**BH16**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH17_2.0	**BH17**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH18_0.1	**BH18**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
BH18_0.5	**BH18**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
MW01_0.05	**MW01**	**13/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
MW01_0.9	**MW01**	**13/06/2020**																				<0.2	<0.05	<0.05	<0.05								
MW01_2.0	**MW01**	**13/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						**50**	**50**	<100	<100	<10			
MW01_3.0	**MW01**	**13/06/2020**																															
MW02A_0.05	**MW02A**	**12/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	**50**	**50**	<100	<100	<10			
MW02A_1.0	**MW02A**	**12/06/2020**																				<0.2	<0.05	<0.05	<0.05						<0.5	<0.5	<0.5
MW02A_13.9	**MW02A**	**12/06/2020**																															
MW02B_13.65	**MW02B**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
MW03A_0.1	**MW03A**	**9/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
MW03A_0.5	**MW03A**	**9/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						<50	<50	<100	<100	<10			
MW03A_1.0	**MW03A**	**9/06/2020**																				<0.2	<0.05	<0.05	<0.05								
MW03A_2.0	**MW03A**	**9/06/2020**																			<0.1												
MW04_0.1	**MW04**	**13/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	**50**	**50**	<100	<100	<10			
MW04_0.5	**MW04**	**13/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	**60**	**60**	<100	<100	<10			
MW05_0.1	**MW05**	**12/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10			
MW05_0.5	**MW05**	**12/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.05	<0.05	<0.05	**50**	**50**	<100	<100	<10	<0.5	<0.5	<0.5
MW06_0.1	**MW06**	**12/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.2	<0.05	<0.05	<0.05	<50	<50	<100	<100	<10	<0.5	<0.5	<0.5
MW06_0.5	**MW06**	**12/06/2020**																				<0.2	<0.05	<0.05	<0.05								
MW06_1.0	**MW06**	**12/06/2020**	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						**50**	**50**	<100	<100	<10			

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil

HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A

	BTEX																					
	Total BTEX	Xylene Total	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-Methylperfluorooctanesulfonamidoethanol (NMeFOSE)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	1	2	2	2	2	0.005	0.005	0.000005	0.000005	0.005	0.002	0.005	0.005	0.002	0.005	0.002	0.01	0.002	0.002
ADWG 2017 Aesthetic		20		3	25																	
ADWG 2017 Health		600	1	300	800																	
ANZG (2018) Freshwater 95% toxicant DGVs			950				350															
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay			5,000 | 5,000																			
PFAS NEMP 2020 Drinking Water																						
PFAS NEMP 2020 Freshwater 99%																						
PFAS NEMP 2020 Recreational Water																						

Field ID	Location Code	Date																					
SW01	**SW01**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW02	**SW02**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	**0.03**	<0.1	<0.02	<0.02
SW03	**SW03**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.1	<0.02	<0.02
SW04_200616	**SW04**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW05_200616	**SW05**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW06_200616	**SW06**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW07	**SW07**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.1	<0.02	<0.02
SW08	**SW08**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.1	<0.02	<0.02
SW09_200617	**SW09**	**17/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	**0.000023**	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW11	**SW11**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.1	<0.02	<0.02
SW12_200617	**SW12**	**17/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	**0.000038**	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002
SW13	**SW13**	**11/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.05	<0.05	<0.00005	<0.00005	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.1	<0.02	<0.02
SW14_200616	**SW14**	**16/06/2020**	<1	<2	<1	<2	<2	<2	<2	<0.005	<0.005	<0.000005	<0.000005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.002	<0.01	<0.002	<0.002

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			PFOS/PFOA																		Phenols		
			Perfluorododecanoic acid (PFDoDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluoro-n-hexadecanoic acid (PFHxDA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	2,6-D	Picloram	C10-C16
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L
EQL			0.002	0.002	0.002	0.002	0.002	0.005	0.002	0.002	0.000002	0.000002	0.002	0.002	0.005	0.002	0.002	0.002	0.002	0.002	0.01	10	100
ADWG 2017 Aesthetic																							
ADWG 2017 Health																						300	
ANZG (2018) Freshwater 95% toxicant DGVs																							
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																							
PFAS NEMP 2020 Drinking Water												0.00056								0.07			
PFAS NEMP 2020 Freshwater 99%											0.00000023	0.019											
PFAS NEMP 2020 Recreational Water												0.01								2			
Field ID	**Location Code**	**Date**																					
SW01	**SW01**	**11/06/2020**	<0.002	<0.002	<0.002	**0.003**	<0.002	<0.005	<0.002	<0.002	**0.000004**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.007**	**0.007**	**0.007**			<100
SW02	**SW02**	**11/06/2020**	<0.02	<0.02	<0.02	**0.24**	**0.03**		<0.02	<0.02	**0.00103**	**0.00001**	<0.02	<0.02	<0.05	<0.02	<0.02	**1.34**	**1.34**	**1.27**	<0.01	<10	<100
SW03	**SW03**	**11/06/2020**	<0.02	<0.02	<0.02	**0.02**	<0.02		<0.02	<0.02	**0.00003**	<0.00001	<0.02	<0.02	<0.05	<0.02	<0.02	**0.05**	**0.05**	**0.05**	<0.01	<10	<100
SW04_200616	**SW04**	**16/06/2020**	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.000004**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.004**	**0.004**	**0.004**			<100
SW05_200616	**SW05**	**16/06/2020**	<0.002	<0.002	<0.002	**0.006**	<0.002	<0.005	<0.002	<0.002	**0.000014**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.020**	**0.020**	**0.020**			<100
SW06_200616	**SW06**	**16/06/2020**	<0.002	<0.002	**0.003**	**0.021**	**0.009**	<0.005	<0.002	<0.002	**0.000070**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.103**	**0.103**	**0.091**	<0.01	<10	<100
SW07	**SW07**	**11/06/2020**	<0.02	<0.02	**0.03**	**0.02**	**0.02**		<0.02	<0.02	**0.00005**	<0.00001	<0.02	<0.02	<0.05	<0.02	<0.02	**0.12**	**0.12**	**0.07**	<0.01	<10	<100
SW08	**SW08**	**11/06/2020**	<0.02	<0.02	<0.02	**0.03**	**0.02**		<0.02	<0.02	**0.00005**	**0.00001**	<0.02	<0.02	<0.05	<0.02	<0.02	**0.11**	**0.11**	**0.08**	<0.01	<10	<100
SW09_200617	**SW09**	**17/06/2020**	<0.002	<0.002	**0.022**	**0.017**	**0.024**	<0.005	<0.002	<0.002	**0.000020**	**0.000005**	<0.002	**0.021**	<0.005	<0.002	<0.002	**0.132**	**0.132**	**0.037**			<100
SW11	**SW11**	**11/06/2020**	<0.02	<0.02	**0.04**	**0.02**	**0.04**		<0.02	<0.02	**0.00005**	<0.00001	<0.02	**0.04**	<0.05	<0.02	<0.02	**0.19**	**0.19**	**0.07**			<100
SW12_200617	**SW12**	**17/06/2020**	<0.002	<0.002	**0.015**	**0.018**	**0.022**	<0.005	<0.002	<0.002	**0.000024**	**0.000005**	<0.002	**0.016**	<0.005	<0.002	<0.002	**0.138**	**0.138**	**0.042**			<100
SW13	**SW13**	**11/06/2020**	<0.02	<0.02	<0.02	**0.02**	<0.02		<0.02	<0.02	**0.00004**	<0.00001	<0.02	<0.02	<0.05	<0.02	<0.02	**0.06**	**0.06**	**0.06**			<100
SW14_200616	**SW14**	**16/06/2020**	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.000019**	<0.000002	<0.002	<0.002	<0.005	<0.002	<0.002	**0.019**	**0.019**	**0.019**	<0.01	<10	**140**

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			TRH						Chlorinated Hydrocarbons																					
			C10-C16 (F2 minus Naphthalene)	C10-C40 (Sum of total)	C16-C34	C34-C40	C6-C10	C6-C10 (F1 minus BTEX)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloroethane	1,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Chloroform	Hexachlorobutadiene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichloroethene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			100	100	100	100	20	20	5	5	5	5	5	5	5	5	5	5	5	50	50	5	5	5	5	5	5	5	5	5
ADWG 2017 Aesthetic																														
ADWG 2017 Health													30	3				3							0.7	50				
ANZG (2018) Freshwater 95% toxicant DGVs											6,500																			
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																														
PFAS NEMP 2020 Drinking Water																														
PFAS NEMP 2020 Freshwater 99%																														
PFAS NEMP 2020 Recreational Water																														
Field ID	**Location Code**	**Date**																												
SW01	**SW01**	**11/06/2020**	<100	<100	<100	<100	<20	<20																						
SW02	**SW02**	**11/06/2020**	<100	<100	<100	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5
SW03	**SW03**	**11/06/2020**	<100	<100	<100	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5
SW04_200616	**SW04**	**16/06/2020**	<100	<100	<100	<100	<20	<20																						
SW05_200616	**SW05**	**16/06/2020**	<100	<100	<100	<100	<20	<20																						
SW06_200616	**SW06**	**16/06/2020**	<100	<100	<100	<100	<20	<20																						
SW07	**SW07**	**11/06/2020**	<100	**260**	**260**	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5
SW08	**SW08**	**11/06/2020**	<100	**110**	**110**	<100	<20	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<5	<5	<5	<5	<5	<5	<5	<5	<5
SW09_200617	**SW09**	**17/06/2020**	<100	<100	<100	<100	<20	<20																						
SW11	**SW11**	**11/06/2020**	<100	<100	<100	<100	<20	<20																						
SW12_200617	**SW12**	**17/06/2020**	<100	<100	<100	<100	<20	<20																						
SW13	**SW13**	**11/06/2020**	<100	<100	<100	<100	<20	<20																						
SW14_200616	**SW14**	**16/06/2020**	**140**	**140**	<100	<100	<20	<20																						

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

											Halogenated Benzenes										Halogenated Hydrocarbons							
			Vinyl chloride	1,1,1,2-tetrachloroethane	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,3-dichloropropane	2,2-dichloropropane	Dibromomethane	Hexachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	1,2,3-trichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Trichlorofluoromethane	Iodomethane	2,4,5-TP (Silvex)	2,4,5-Trichlorophenoxy Acetic Acid	2,4,6-Trichlorophenoxy-acetic acid
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L
EQL			50	5	5	5	5	5	5	5	0.5	5	5	5	5	5	5	5	5	5	5	50	50	50	5	0.01	0.01	0.01
ADWG 2017 Aesthetic													1	20	0.3	10												
ADWG 2017 Health			0.3										1,500		40	300					1	1				0.01	0.1	
ANZG (2018) Freshwater 95% toxicant DGVs												170	160	260	60		10										0.036	
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																												
PFAS NEMP 2020 Drinking Water																												
PFAS NEMP 2020 Freshwater 99%																												
PFAS NEMP 2020 Recreational Water																												
Field ID	**Location Code**	**Date**																										
SW01	**SW01**	**11/06/2020**									<0.5																	
SW02	**SW02**	**11/06/2020**	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01
SW03	**SW03**	**11/06/2020**	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01
SW04_200616	**SW04**	**16/06/2020**									<0.5																	
SW05_200616	**SW05**	**16/06/2020**									<0.5																	
SW06_200616	**SW06**	**16/06/2020**									<0.5															<0.01	<0.01	<0.01
SW07	**SW07**	**11/06/2020**	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01
SW08	**SW08**	**11/06/2020**	<50	<5	<5	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<50	<50	<5	<0.01	<0.01	<0.01
SW09_200617	**SW09**	**17/06/2020**									<0.5																	
SW11	**SW11**	**11/06/2020**									<0.5																	
SW12_200617	**SW12**	**17/06/2020**									<0.5																	
SW13	**SW13**	**11/06/2020**									<0.5																	
SW14_200616	**SW14**	**16/06/2020**									<0.5															<0.01	<0.01	<0.01

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Herbicides											Metals												
			2,4-Dichlorprop	2-Methyl-4-Chlorophenoxy Butanoic Acid	2-Methyl-4-chlorophenoxyacetic acid	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Fluroxypyr	Hedonal	Mecoprop	Triclopyr	Cadmium (filtered)	Arsenic (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)
			mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.01	10	10	10	0.01	10	10	10	0.01	10	0.01	0.0001	0.001	0.001	0.001	0.001	0.0001	0.001	0.005	0.5	0.5	0.5	0.5	0.5
ADWG 2017 Aesthetic																	1				3					
ADWG 2017 Health			0.1		40			2,000	100		0.03		0.02	0.002	0.01		2	0.01	0.001	0.02						
ANZG (2018) Freshwater 95% toxicant DGVs											0.28			0.0002			0.0014	0.0034	0.0006	0.011	0.008					
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																										
PFAS NEMP 2020 Drinking Water																										
PFAS NEMP 2020 Freshwater 99%																										
PFAS NEMP 2020 Recreational Water																										
Field ID	**Location Code**	**Date**																								
SW01	**SW01**	**11/06/2020**												<0.0001	<0.001	<0.001	**0.004**	<0.001	<0.0001	<0.001	**0.008**	<0.5	<0.5	<0.5	<0.5	<0.5
SW02	**SW02**	**11/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	<0.001	<0.001	**0.006**	<0.001	<0.0001	**0.002**	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
SW03	**SW03**	**11/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	**0.002**	<0.001	**0.003**	<0.001	<0.0001	**0.005**	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
SW04_200616	**SW04**	**16/06/2020**												<0.0001	<0.001	<0.001	**0.002**	<0.001	<0.0001	**0.003**	**0.037**	<0.5	<0.5	<0.5	<0.5	<0.5
SW05_200616	**SW05**	**16/06/2020**												<0.0001	**0.001**	<0.001	**0.003**	<0.001	<0.0001	**0.005**	**0.006**	<0.5	<0.5	<0.5	<0.5	<0.5
SW06_200616	**SW06**	**16/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	**0.001**	<0.001	**0.007**	<0.001	<0.0001	**0.006**	**0.010**	<0.5	<0.5	<0.5	<0.5	<0.5
SW07	**SW07**	**11/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	**0.004**	**0.002**	**0.012**	**0.003**	<0.0001	**0.009**	**0.007**	<0.5	<0.5	<0.5	<0.5	<0.5
SW08	**SW08**	**11/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	**0.001**	<0.001	**0.006**	<0.001	<0.0001	**0.005**	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
SW09_200617	**SW09**	**17/06/2020**												<0.0001	<0.001	<0.001	**0.003**	<0.001	<0.0001	**0.002**	**0.063**	<0.5	<0.5	<0.5	<0.5	<0.5
SW11	**SW11**	**11/06/2020**												<0.0001	<0.001	<0.001	**0.007**	<0.001	<0.0001	**0.005**	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
SW12_200617	**SW12**	**17/06/2020**												<0.0001	<0.001	<0.001	**0.002**	<0.001	<0.0001	**0.005**	**0.234**	<0.5	<0.5	<0.5	<0.5	<0.5
SW13	**SW13**	**11/06/2020**												<0.0001	<0.001	<0.001	**0.006**	<0.001	<0.0001	**0.002**	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
SW14_200616	**SW14**	**16/06/2020**	<0.01	<10	<10	<10	<0.01	<10	<10	<10	<0.01	<10	<0.01	<0.0001	**0.002**	<0.001	**0.004**	**0.001**	<0.0001	**0.004**	**0.037**	<0.5	<0.5	<0.5	<0.5	<0.5

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Organochlorine Pesticides																		Organophosphorous							
			Chlordane (trans)	d-BHC	DDD	DDT	Heptachlor	Heptachlor epoxide	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Methoxychlor	Aldrin + Dieldrin	chlordane	Endrin ketone	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Azinophos methyl	Bromophos-ethyl	Ethion	Malathion
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5
ADWG 2017 Aesthetic																												
ADWG 2017 Health						9	0.3									10		0.3	2		10		4	5	30	10	4	70
ANZG (2018) Freshwater 95% toxicant DGVs						0.01	0.09							0.02		0.2			0.08		0.01		0.01		0.02			0.05
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																												
PFAS NEMP 2020 Drinking Water																												
PFAS NEMP 2020 Freshwater 99%																												
PFAS NEMP 2020 Recreational Water																												
Field ID	**Location Code**	**Date**																										
SW01	**SW01**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW02	**SW02**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW03	**SW03**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW04_200616	**SW04**	**16/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW05_200616	**SW05**	**16/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW06_200616	**SW06**	**16/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW07	**SW07**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW08	**SW08**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW09_200617	**SW09**	**17/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW11	**SW11**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW12_200617	**SW12**	**17/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW13	**SW13**	**11/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SW14_200616	**SW14**	**16/06/2020**	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.0005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Pesticides							PAH																		PCBs
			Dimethoate	Carbophenothion	Chlorfenvinphos	Fenthion	Methyl parathion	Monocrotophos	Prothiofos	Naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	PAHs (Sum of total)	Phenanthrene	Pyrene	PCBs (Sum of total)
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			0.5	0.5	0.5	0.5	2	2	0.5	1	1	1	1	1	0.5	0.0005	0.001	1	1	1	1	1	1	1	0.5	1	1	1
ADWG 2017 Aesthetic																												
ADWG 2017 Health			7	0.5	2	7	0.7	2							0.01													
ANZG (2018) Freshwater 95% toxicant DGVs			0.15							16																		
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																												
PFAS NEMP 2020 Drinking Water																												
PFAS NEMP 2020 Freshwater 99%																												
PFAS NEMP 2020 Recreational Water																												
Field ID	**Location Code**	**Date**																										
SW01	**SW01**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW02	**SW02**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW03	**SW03**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW04_200616	**SW04**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW05_200616	**SW05**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW06_200616	**SW06**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW07	**SW07**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1
SW08	**SW08**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1
SW09_200617	**SW09**	**17/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW11	**SW11**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1
SW12_200617	**SW12**	**17/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	
SW13	**SW13**	**11/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1
SW14_200616	**SW14**	**16/06/2020**	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<0.8	<0.0005	<0.0010	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Pesticides				TPH					VOCs		
			Parathion	Demeton-S-methyl	Fenamiphos	Pirimphos-ethyl	+C10-C36 (Sum of total)	C10-C14	C15-C28	C29-C36	C6-C9	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene
			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL			2	0.5	0.5	0.5	50	50	100	50	20	5	5	5
ADWG 2017 Aesthetic														
ADWG 2017 Health			20		0.5	0.5								
ANZG (2018) Freshwater 95% toxicant DGVs			0.004											
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay														
PFAS NEMP 2020 Drinking Water														
PFAS NEMP 2020 Freshwater 99%														
PFAS NEMP 2020 Recreational Water														
Field ID	**Location Code**	**Date**												
SW01	**SW01**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW02	**SW02**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20	<5	<5	<5
SW03	**SW03**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20	<5	<5	<5
SW04_200616	**SW04**	**16/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW05_200616	**SW05**	**16/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW06_200616	**SW06**	**16/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW07	**SW07**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	**270**	<50	**140**	**130**	<20	<5	<5	<5
SW08	**SW08**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	**100**	<50	**100**	<50	<20	<5	<5	<5
SW09_200617	**SW09**	**17/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW11	**SW11**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW12_200617	**SW12**	**17/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW13	**SW13**	**11/06/2020**	<2.0	<0.5	<0.5	<0.5	<50	<50	<100	<50	<20			
SW14_200616	**SW14**	**16/06/2020**	<2.0	<0.5	<0.5	<0.5	**240**	<50	**160**	**80**	<20			

Environmental Standards

NHMRC, October 2017, ADWG 2017 Aesthetic
NHMRC, October 2017, ADWG 2017 Health
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Drinking Water
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%
HEPA, January 2020, PFAS NEMP 2020 Recreational Water

			Field ID	QC300_200615	QC301_200616	QC302_200617	RIN_200610	RIN_200611	RIN_200613	RIN_200614
			Matrix Type	water	water	water	water	water	water	water
			Date	15/06/2020	16/06/2020	17/06/2020	10/06/2020	11/06/2020	13/06/2020	14/06/2020
	Unit	EQL								
BTEX										
Total BTEX	µg/L	1		<1	<1	<1				
Xylene Total	µg/L	2		<2	<2	<2				
Benzene	µg/L	1		<1	<1	<1				
Ethylbenzene	µg/L	2		<2	<2	<2				
Toluene	µg/L	2		<2	<2	<2				
Xylene (m & p)	µg/L	2		<2	<2	<2				
Xylene (o)	µg/L	2		<2	<2	<2				
PFOS/PFOA										
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005		<0.005	<0.005	<0.005				
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005		<0.005	<0.005	<0.005				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	<0.000005				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	<0.000005				
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002		<0.002	<0.002	<0.002				
Perfluorobutanoic acid (PFBA)	µg/L	0.01		<0.01	<0.01	<0.01				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002		<0.002	<0.002	<0.002				
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002		<0.002	<0.002	<0.002				
Perfluorohexanoic acid (PFHxA)	µg/L	0.002		<0.002	<0.002	<0.002				
Perfluorooctanesulfonic acid (PFOS)	mg/L	0.000002		<0.000002	<0.000002	<0.000002				
Perfluorooctanoic acid (PFOA)	mg/L	0.000002		<0.000002	<0.000002	<0.000002				
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.002	<0.002				
Sum of PFAS (WA DER List)	µg/L	0.002		<0.002	<0.002	<0.002				
Sum of PFHxS and PFOS	µg/L	0.002		<0.002	<0.002	<0.002				
TRH										
C10-C16	µg/L	100		<100	<100	<100				
C10-C16 (F2 minus Naphthalene)	µg/L	100		<100	<100	<100				
C10-C40 (Sum of total)	µg/L	100		<100	<100	<100				
C16-C34	µg/L	100		<100	<100	<100				
C34-C40	µg/L	100		<100	<100	<100				
C6-C10	µg/L	20		<20	<20	<20				
C6-C10 (F1 minus BTEX)	µg/L	20		<20	<20	<20				
Metals										
Cadmium	mg/L	0.0001					<0.0001	<0.0001	<0.0001	<0.0001
Cadmium (filtered)	mg/L	0.0001		<0.0001	<0.0001	<0.0001				
Arsenic	mg/L	0.001					<0.001	<0.001	<0.001	<0.001
Arsenic (filtered)	mg/L	0.001		<0.001	<0.001	<0.001				
Chromium (III+VI)	mg/L	0.001					<0.001	<0.001	<0.001	<0.001
Chromium (III+VI) (filtered)	mg/L	0.001		<0.001	<0.001	<0.001				
Copper	mg/L	0.001					<0.001	<0.001	<0.001	<0.001
Copper (filtered)	mg/L	0.001		0.005	<0.001	<0.001				
Lead	mg/L	0.001					<0.001	<0.001	<0.001	<0.001
Lead (filtered)	mg/L	0.001		<0.001	<0.001	<0.001				
Mercury	mg/L	0.0001					<0.0001	<0.0001	<0.0001	<0.0001
Mercury (filtered)	mg/L	0.0001		<0.0001	<0.0001	<0.0001				
Nickel	mg/L	0.001					<0.001	<0.001	<0.001	<0.001
Nickel (filtered)	mg/L	0.001		<0.001	<0.001	<0.001				
Zinc	mg/L	0.005					<0.005	<0.005	<0.005	<0.005
Zinc (filtered)	mg/L	0.005		<0.005	<0.005	<0.005				
PAH										
Naphthalene	µg/L	1		<1.0	<1.0	<1.0				
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(a)pyrene TEQ calc (Zero)	mg/L	0.0005		<0.0005	<0.0005	<0.0005				
Benzo(b+j)fluoranthene	mg/L	0.001		<0.0010	<0.0010	<0.0010				
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				
PAHs (Sum of total)	µg/L	0.5		<0.5	<0.5	<0.5				
Phenanthrene	µg/L	1		<1.0	<1.0	<1.0				
Pyrene	µg/L	1		<1.0	<1.0	<1.0				
TPH										
+C10-C36 (Sum of total)	µg/L	50		<50	<50	<50				
C10-C14	µg/L	50		<50	<50	<50				
C15-C28	µg/L	100		<100	<100	<100				
C29-C36	µg/L	50		<50	<50	<50				
C6-C9	µg/L	20		<20	<20	<20				

			Lab Report Number	ES2020331	ES2020331		ES2020331	244865		ES2020331	ES2020331		ES2020331	244865		ES2020525	ES2020525		ES2020525	244965		EM2010131	EM2010131		EM2010131	21470		ES2021234	ES2021234		ES2021234	245159	
			Field ID	BH01_1.0	QA01		BH01_1.0	QA02		BH04_0.5	QA03		BH04_0.5	QA04		BH15_0.1	QA05		BH15_0.1	QA06		MW05_0.5	QA07		MW05_0.5	QA08		SD05_200616	QC101_200616		SD12_200617	QC201_200617	
			Matrix Type	soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil	
			Date	10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	11/06/2020	11/06/2020	RPD	11/06/2020	11/06/2020	RPD	12/06/2020	12/06/2020	RPD	12/06/2020	12/06/2020	RPD	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL																															
NA																																	
Moisture Content	%	1		**11.8**	**12.7**	7	**11.8**			**15.4**	**13.0**	17	**15.4**			**12.9**	**12.8**	1	**12.9**			**16.7**	**17.3**	4	**16.7**			**22.0**	**23.4**	6	**56.9**		
BTEX																																	
Total BTEX	mg/kg	0.2		<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2	<1	0	<0.2	<0.2	0	<0.2		
Xylene Total	mg/kg	0.5		<0.5	<0.5	0	<0.5	<3	0	<0.5	<0.5	0	<0.5	<3	0	<0.5	<0.5	0	<0.5	<3	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<3	0
Benzene	mg/kg	0.2		<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Ethylbenzene	mg/kg	0.5		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0
Toluene	mg/kg	0.5		<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Xylene (m & p)	mg/kg	0.5		<0.5	<0.5	0	<0.5	<2	0	<0.5	<0.5	0	<0.5	<2	0	<0.5	<0.5	0	<0.5	<2	0	<0.5	<0.5	0	<0.5	<2	0	<0.5	<0.5	0	<0.5	<2	0
Xylene (o)	mg/kg	0.5		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0
PFOS/PFOA																																	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	0.2			<0.5			<0.2		<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.5	0	<0.5	<0.2	0		<0.5		<0.5		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	0.1			<0.5			<0.1		<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0		<0.5		<0.5		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0001			<0.0005			<0.0001		<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0		<0.0005		<0.0005	<0.0002	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0002			<0.0005			<0.0002		<0.0005	<0.0005	0	<0.0005	<0.0002	0	<0.0005	<0.0005	0	<0.0005	<0.0002	0	<0.0005	<0.0005	0	<0.0005	<0.0002	0		<0.0005		<0.0005	<0.0004	0
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0				<0.5		
N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	µg/kg	0.2			<0.2			<0.2		<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0				<0.2		
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/kg	0.5			<0.5			<5		<0.5	<0.5	0	<0.5	<5	0	<0.5	<0.5	0	<0.5	<5	0	<0.5	<0.5	0	<0.5	<5	0				<0.5		
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0				<0.5		
N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	µg/kg	0.2			<0.2			<0.2		<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0				<0.2		
N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	mg/kg	0.0005			<0.0005			<0.001		<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0	<0.0005	<0.0005	0	<0.0005	<0.001	0				<0.0005		
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0001			<0.0002			<0.0001		<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0		<0.0002		<0.0002		
Perfluorobutanoic acid (PFBA)	µg/kg	0.2			<1			<0.2		<1	<1	0	<1	<0.2	0	<1	<1	0	<1	<0.2	0	<1	<1	0	<1	<0.2	0		<1		<1		
Perfluorodecanesulfonic acid (PFDS)	µg/kg	0.2			<0.2			<0.2		<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0				<0.2		
Perfluorodecanoic acid (PFDA)	µg/kg	0.2			<0.2			<0.5		<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0				<0.2		
Perfluorododecanoic acid (PFDoDA)	µg/kg	0.2			<0.2			<0.5		<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0				<0.2		
Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	0.1			<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2						<0.2		
Perfluoroheptanoic acid (PFHpA)	µg/kg	0.1			<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0		<0.2		<0.2		
Perfluorohexane sulfonic acid (PFHxS)	µg/kg	0.1			**0.7**			**0.8**		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0		<0.2		<0.2	<0.2	0
Perfluorohexanoic acid (PFHxA)	µg/kg	0.1			<0.2			**0.2**		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0		<0.2		<0.2		
Perfluorononanoic acid (PFNA)	µg/kg	0.1			<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0				<0.2		
Perfluorooctane sulfonamide (PFOSA)	µg/kg	0.2			<0.2			<1		<0.2	<0.2	0	<0.2	<1	0	<0.2	<0.2	0	<0.2	<1	0	<0.2	<0.2	0	<0.2	<1	0				<0.2		
Perfluorooctanesulfonic acid (PFOS)	mg/kg	0.0001			<0.0002			<0.0001		<0.0002	<0.0002	0	<0.0002	<0.0001	0	**0.0004**	**0.0003**	29	**0.0004**	**0.0003**	29	<0.0002	<0.0002	0	<0.0002	<0.0001	0		<0.0002		**0.0023**	**0.0048**	70
Perfluorooctanoic acid (PFOA)	mg/kg	0.0001			<0.0002			<0.0001		<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0		<0.0002		<0.0002	<0.0002	0
Perfluoropentane sulfonic acid (PFPeS)	µg/kg	0.1			<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0				<0.2		
Perfluoropentanoic acid (PFPeA)	µg/kg	0.2			<0.2			<0.2		<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0		<0.2		<0.2		
Perfluorotetradecanoic acid (PFTeDA)	µg/kg	0.5			<0.5			<5		<0.5	<0.5	0	<0.5	<5	0	<0.5	<0.5	0	<0.5	<5	0	<0.5	<0.5	0	<0.5	<5	0				<0.5		
Perfluorotridecanoic acid (PFTrDA)	µg/kg	0.2			<0.2			<0.5		<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0				<0.2		
Perfluoroundecanoic acid (PFUnDA)	µg/kg	0.2			<0.2			<0.5		<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.2	0	<0.2	<0.5	0				<0.2		
Sum of PFAS	µg/kg	0.1			**0.7**			**0.9**		<0.2	<0.2	0	<0.2	<0.1	0	**0.4**	**0.3**	29	**0.4**	**0.3**	29	<0.2	<0.2	0	<0.2	<0.1	0				**2.3**	**4.8**	70
Sum of PFAS (WA DER List)	µg/kg	0.2			**0.7**					<0.2	<0.2	0	<0.2			**0.4**	**0.3**	29	**0.4**			<0.2	<0.2	0	<0.2				<0.2		**2.3**		
Sum of PFHxS and PFOS	µg/kg	0.1			**0.7**			**0.8**		<0.2	<0.2	0	<0.2	<0.1	0	**0.4**	**0.3**	29	**0.4**	**0.3**	29	<0.2	<0.2	0	<0.2	<0.1	0		<0.2		**2.3**	**4.8**	70
Sum of US EPA PFAS (PFOS + PFOA)*	µg/kg	0.1						<0.1						<0.1						**0.3**						<0.1						**4.8**	
TRH																																	
C10-C16	mg/kg	50		<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
C10-C16 (F2 minus Naphthalene)	mg/kg	50		<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
C10-C40 (Sum of total)	mg/kg	50		<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	**120**	82	<50	<50	0	<50	<50	0	<50	<50	0	**480**	<50	162
C16-C34	mg/kg	100		<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	**120**	18	<100	<100	0	<100	<100	0	<100	<100	0	**280**	<100	95
C34-C40	mg/kg	100		<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	**200**	<100	67
C6-C10	mg/kg	10		<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0
C6-C10 (F1 minus BTEX)	mg/kg	10		<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0
Chlorinated Hydrocarbons																																	
1,1,1-trichloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,1,2,2-tetrachloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,1,2-trichloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,1-dichloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,1-dichloroethene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2-dichloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2-dichloropropane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Bromodichloromethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Bromoform	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Carbon tetrachloride	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Chlorodibromomethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Chloroethane	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
Chloromethane	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
cis-1,2-dichloroethene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
cis-1,3-dichloropropene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Chloroform	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Hexachlorobutadiene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Tetrachloroethene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
trans-1,2-dichloroethene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
trans-1,3-dichloropropene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Trichloroethene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Vinyl chloride	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
1,1,1,2-tetrachloroethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,1-dichloropropene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2,3-trichloropropane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2-dibromo-3-chloropropane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,3-dichloropropane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
2,2-dichloropropane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Dibromomethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Halogenated Benzenes																																	
Hexachlorobenzene	mg/kg	0.05			<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
1,2,4-trichlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2-dichlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,3-dichlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,4-dichlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Chlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
1,2,3-trichlorobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
2-chlorotoluene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
4-chlorotoluene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Bromobenzene	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Halogenated Hydrocarbons																																	
1,2-dibromoethane	mg/kg	0.5			<0.5			<1		<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<1	0	<0.5	<0.5	0	<0.5	<0.5	0						
Bromomethane	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
Dichlorodifluoromethane	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
Trichlorofluoromethane	mg/kg	1			<5			<1		<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0	<5	<5	0	<5	<1	0						
Iodomethane	mg/kg	0.5			<0.5					<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5								
Metals																																	
Cadmium	mg/kg	0.4		<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0
Arsenic	mg/kg	4		<5	<5	0	<5	<4	0	<5	<5	0	<5	<4	0	<5	<5	0	<5	<4	0	**6**	**6**	0	**6**	<4	40	**5**	**6**	18	**8**	<4	67
Chromium (III+VI)	mg/kg	1		**28**	**30**	7	**28**	**25**	11	**29**	**36**	22	**29**	**33**	13	**28**	**24**	15	**28**	**31**	10	**66**	**30**	75	**66**	**24**	93	**24**	**23**	4	**32**	**21**	42
Copper	mg/kg	1		**15**	**16**	6	**15**	**15**	0	**16**	**13**	21	**16**	**14**	13	**10**	**9**	11	**10**	**7**	35	**13**	**14**	7	**13**	**11**	17	**15**	**15**	0	**28**	**18**	43
Lead	mg/kg	1		**12**	**10**	18	**12**	**12**	0	**12**	**12**	0	**12**	**12**	0	**14**	**13**	7	**14**	**10**	33	**12**	**12**	0	**12**	**10**	18	**13**	**13**	0	**28**	**16**	55
Mercury	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Nickel	mg/kg	1		**12**	**12**	0	**12**	**13**	8	**11**	**9**	20	**11**	**12**	9	**12**	**12**	0	**12**	**9**	29	**26**	**32**	21	**26**	**15**	54	**13**	**13**	0	**25**	**16**	44
Zinc	mg/kg	1		**22**	**24**	9	**22**	**21**	5	**12**	**10**	18	**12**	**16**	29	**14**	**14**	0	**14**	**11**	24	**18**	**17**	6	**18**	**14**	25	**20**	**18**	11	**46**	**29**	45
Organochlorine Pesticides																																	
4,4-DDE	mg/kg	0.05			<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
a-BHC	mg/kg	0.05			<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Aldrin	mg/kg	0.05			<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		

Lab Report Number			ES2020331	ES2020331		ES2020331	244865		ES2020331	ES2020331		ES2020331	244865		ES2020525	ES2020525		ES2020525	244965		EM2010131	EM2010131		EM2010131	21470		ES2021234	ES2021234		ES2021234	245159	
Field ID			BH01_1.0	QA01		BH01_1.0	QA02		BH04_0.5	QA03		BH04_0.5	QA04		BH15_0.1	QA05		BH15_0.1	QA06		MW05_0.5	QA07		MW05_0.5	QA08		SD05_200616	QC101_200616		SD12_200617	QC201_200617	
Matrix Type			soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil		soil	soil	
Date			10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	10/06/2020	10/06/2020	RPD	11/06/2020	11/06/2020	RPD	11/06/2020	11/06/2020	RPD	12/06/2020	12/06/2020	RPD	12/06/2020	12/06/2020	RPD	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL																														
NA																																
Moisture Content	%	1	11.8	12.7	7	11.8			15.4	13.0	17	15.4			12.9	12.8	1	12.9			16.7	17.3	4	16.7			22.0	23.4	6	56.9		
b-BHC	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Chlordane (cis)	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Chlordane (trans)	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
d-BHC	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Heptachlor	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
DDD	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Heptachlor epoxide	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
DDT	mg/kg	0.1		<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2			<0.2		
DDT+DDE+DDD	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Dieldrin	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Endosulfan I	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Endosulfan II	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Endosulfan sulphate	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Endrin	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Endrin aldehyde	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
g-BHC (Lindane)	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Methoxychlor	mg/kg	0.1		<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2			<0.2		
Aldrin + Dieldrin	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
chlordane	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Endosulfan	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Endrin ketone	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Organophosphorous Pesticides																																
Chlorpyrifos	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Chlorpyrifos-methyl	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Diazinon	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Dichlorvos	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Azinophos methyl	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Ethion	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Bromophos-ethyl	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Malathion	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Dimethoate	mg/kg	0.05		<0.05			<0.1		<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05			<0.05		
Carbophenothion	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Chlorfenvinphos	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Fenthion	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Methyl parathion	mg/kg	0.2		<0.2					<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2			<0.2		
Monocrotophos	mg/kg	0.2		<0.2					<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2	<0.2	0	<0.2			<0.2			<0.2		
Prothiofos	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
PAH																																
Naphthalene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<1	0	<0.8	<1	0
Acenaphthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Acenaphthylene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Benz(a)anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Benzo(a) pyrene	mg/kg	0.05	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5			<0.8		
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5			<0.8		
Benzo(g,h,i)perylene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5			<0.8		
Chrysene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Dibenz(a,h)anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Fluoranthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Fluorene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
PAHs (Sum of total)	mg/kg	0.05	<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5	<0.05	0	<0.5			<0.5		
Phenanthrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
Pyrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	<0.5			<0.8		
PCBs																																
PCBs (Sum of total)	mg/kg	0.1		<0.1			<0.1		<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0						
Pesticides																																
Parathion	mg/kg	0.1		<0.2			<0.1		<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	<0.2			<0.2		
Demeton-S-methyl	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Fenamiphos	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
Pirimphos-ethyl	mg/kg	0.05		<0.05					<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05	<0.05	0	<0.05			<0.05			<0.05		
TPH																																
+C10-C36 (Sum of total)	mg/kg	50	<50	<50	0	<50			<50	<50	0	<50			<50	<50	0	<50			**50**	**50**	0	**50**	<50	0	<50	<50	0	**380**		
C10-C14	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	**50**	**50**	0	**50**	<50	0	<50	<50	0	<50	<50	0
C15-C28	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	**110**	<100	10
C29-C36	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	**270**	<100	92
C6-C9	mg/kg	10	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0	<10	<10	0	<10	<25	0
VOCs																																
cis-1,4-Dichloro-2-butene	mg/kg	0.5		<0.5					<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5								
Pentachloroethane	mg/kg	0.5		<0.5					<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5								
trans-1,4-Dichloro-2-butene	mg/kg	0.5		<0.5					<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5			<0.5	<0.5	0	<0.5								

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

			Lab Report Number	ES2021234	ES2021234		ES2021234	245159	
			Field ID	MW03A_200616	QC103_200616		MW01_200617	QC200_200617	
			Matrix Type	water	water		water	water	
			Date	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL							
BTEX									
Total BTEX	µg/L	1		<1	<1	0	<1		
Xylene Total	µg/L	2		<2	<2	0	<2		
Benzene	µg/L	1		<1	<1	0	<1	<1	0
Ethylbenzene	µg/L	1		<2	<2	0	<2	<1	0
Toluene	µg/L	1		<2	<2	0	<2	<1	0
Xylene (m & p)	µg/L	2		<2	<2	0	<2	<2	0
Xylene (o)	µg/L	1		<2	<2	0	<2	<1	0
PFOS/PFOA									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005		<0.005	<0.005	0	<0.005		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005		<0.005	<0.005	0	<0.005		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	0	<0.000005	<0.00001	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	0	<0.000005	<0.00002	0
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.005		<0.005			<0.005		
N-ethyl-perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	µg/L	0.002		<0.002			<0.002		
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.005		<0.005			<0.005		
N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.005		<0.005			<0.005		
N-methylperfluorooctane sulfonamidoacetic acid (NMeFOSAA)	µg/L	0.002		<0.002			<0.002		
N-Methylperfluorooctanesulfonamidoethanol (N-MeFOSE)	µg/L	0.005		<0.005			<0.005		
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002		<0.002	<0.002	0	**0.009**		
Perfluorobutanoic acid (PFBA)	µg/L	0.01		<0.01	<0.01	0	<0.01		
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.002		<0.002			<0.002		
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.002			<0.002		
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.002			<0.002		
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002		<0.002			<0.002		
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002		<0.002	<0.002	0	<0.002		
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002		<0.002	<0.002	0	**0.013**	<0.01	26
Perfluorohexanoic acid (PFHxA)	µg/L	0.002		<0.002	<0.002	0	**0.008**		
Perfluoro-n-hexadecanoic acid (PFHxDA)	µg/L	0.005		<0.005			<0.005		
Perfluorononanoic acid (PFNA)	µg/L	0.002		<0.002			<0.002		
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.002		<0.002			<0.002		
Perfluorooctanesulfonic acid (PFOS)	mg/L	0.000002		<0.000002	<0.000002	0	**0.000003**	<0.00001	0
Perfluorooctanoic acid (PFOA)	mg/L	0.000002		<0.000002	<0.000002	0	<0.000002	<0.00001	0
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002		<0.002			<0.002		
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.002	0	<0.002		
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.005			<0.005		
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.002			<0.002		
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.002			<0.002		
Sum of PFAS	µg/L	0.002		<0.002			**0.033**	<0.01	107
Sum of PFAS (WA DER List)	µg/L	0.002		<0.002	<0.002	0	**0.033**		
Sum of PFHxS and PFOS	µg/L	0.002		<0.002	<0.002	0	**0.016**	<0.01	46
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01						<0.01	
Phenols									
2,6-D	mg/L	0.01		<0.01			<0.01		
Picloram	µg/L	10		<10			<10		
TRH									
C10-C16	µg/L	50		<100	<100	0	<100	<50	0
C10-C16 (F2 minus Naphthalene)	µg/L	50		<100	<100	0	<100	<50	0
C10-C40 (Sum of total)	µg/L	100		<100	<100	0	<100		
C16-C34	µg/L	100		<100	<100	0	<100	<100	0
C34-C40	µg/L	100		<100	<100	0	<100	<100	0
C6-C10	µg/L	10		<20	<20	0	<20	<10	0
C6-C10 (F1 minus BTEX)	µg/L	10		<20	<20	0	<20	<10	0
Chlorinated Hydrocarbons									
1,1,1-trichloroethane	µg/L	5					<5		
1,1,2,2-tetrachloroethane	µg/L	5					<5		
1,1,2-trichloroethane	µg/L	5					<5		
1,1-dichloroethane	µg/L	5					<5		
1,1-dichloroethene	µg/L	5					<5		
1,2-dichloroethane	µg/L	5					<5		
1,2-dichloropropane	µg/L	5					<5		
Bromodichloromethane	µg/L	5					<5		
Bromoform	µg/L	5					<5		
Carbon tetrachloride	µg/L	5					<5		
Chlorodibromomethane	µg/L	5					<5		
Chloroethane	µg/L	50					<50		
Chloromethane	µg/L	50					<50		

			Lab Report Number	ES2021234	ES2021234		ES2021234	245159	
			Field ID	MW03A_200616	QC103_200616		MW01_200617	QC200_200617	
			Matrix Type	water	water		water	water	
			Date	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL							
cis-1,2-dichloroethene	µg/L	5					<5		
cis-1,3-dichloropropene	µg/L	5					<5		
Chloroform	µg/L	5					<5		
Hexachlorobutadiene	µg/L	5					<5		
Tetrachloroethene	µg/L	5					<5		
trans-1,2-dichloroethene	µg/L	5					<5		
trans-1,3-dichloropropene	µg/L	5					<5		
Trichloroethene	µg/L	5					<5		
Vinyl chloride	µg/L	50					<50		
1,1,1,2-tetrachloroethane	µg/L	5					<5		
1,1-dichloropropene	µg/L	5					<5		
1,2,3-trichloropropane	µg/L	5					<5		
1,2-dibromo-3-chloropropane	µg/L	5					<5		
1,3-dichloropropane	µg/L	5					<5		
2,2-dichloropropane	µg/L	5					<5		
Dibromomethane	µg/L	5					<5		
Halogenated Benzenes									
Hexachlorobenzene	µg/L	0.5		<0.5			<0.5		
1,2,4-trichlorobenzene	µg/L	5					<5		
1,2-dichlorobenzene	µg/L	5					<5		
1,3-dichlorobenzene	µg/L	5					<5		
1,4-dichlorobenzene	µg/L	5					<5		
Chlorobenzene	µg/L	5					<5		
1,2,3-trichlorobenzene	µg/L	5					<5		
2-chlorotoluene	µg/L	5					<5		
4-chlorotoluene	µg/L	5					<5		
Bromobenzene	µg/L	5					<5		
Halogenated Hydrocarbons									
1,2-dibromoethane	µg/L	5					<5		
Bromomethane	µg/L	50					<50		
Dichlorodifluoromethane	µg/L	50					<50		
Trichlorofluoromethane	µg/L	50					<50		
Iodomethane	µg/L	5					<5		
Herbicides									
2,4,5-TP (Silvex)	mg/L	0.01		<0.01			<0.01		
2,4,5-Trichlorophenoxy Acetic Acid	mg/L	0.01		<0.01			<0.01		
2,4,6-Trichlorophenoxy-acetic acid	mg/L	0.01		<0.01			<0.01		
2,4-Dichlorprop	mg/L	0.01		<0.01			<0.01		
2-Methyl-4-Chlorophenoxy Butanoic Acid	µg/L	10		<10			<10		
2-Methyl-4-chlorophenoxyacetic acid	µg/L	10		<10			<10		
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	µg/L	10		<10			<10		
4-Chlorophenoxy acetic acid	mg/L	0.01		<0.01			<0.01		
Clopyralid	µg/L	10		<10			<10		
Dicamba	µg/L	10		<10			<10		
Fluroxypyr	µg/L	10		<10			<10		
Hedonal	mg/L	0.01		<0.01			<0.01		
Mecoprop	µg/L	10		<10			<10		
Triclopyr	mg/L	0.01		<0.01			<0.01		
Metals									
Cadmium (filtered)	mg/L	0.0001		<0.0001	<0.0001	0	<0.0001	<0.0001	0
Arsenic (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.001**	**0.001**	0
Chromium (III+VI) (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.015**	**0.015**	0
Copper (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.001**	<0.001	0
Lead (filtered)	mg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0
Mercury (filtered)	mg/L	0.00005		<0.0001	<0.0001	0	<0.0001	<0.00005	0
Nickel (filtered)	mg/L	0.001		**0.004**	**0.004**	0	<0.001	<0.001	0
Zinc (filtered)	mg/L	0.001		**0.364**	**0.490**	30	**0.015**	**0.017**	13
Organochlorine Pesticides									
4,4-DDE	µg/L	0.5		<0.5			<0.5		
a-BHC	µg/L	0.5		<0.5			<0.5		
Aldrin	µg/L	0.5		<0.5			<0.5		
b-BHC	µg/L	0.5		<0.5			<0.5		
Chlordane (cis)	µg/L	0.5		<0.5			<0.5		
Chlordane (trans)	µg/L	0.5		<0.5			<0.5		
d-BHC	µg/L	0.5		<0.5			<0.5		
Heptachlor	µg/L	0.5		<0.5			<0.5		
DDD	µg/L	0.5		<0.5			<0.5		
Heptachlor epoxide	µg/L	0.5		<0.5			<0.5		
DDT	µg/L	2		<2.0			<2.0		
DDT+DDE+DDD	µg/L	0.5		<0.5			<0.5		
Dieldrin	µg/L	0.5		<0.5			<0.5		
Endosulfan I	µg/L	0.5		<0.5			<0.5		
Endosulfan II	µg/L	0.5		<0.5			<0.5		
Endosulfan sulphate	µg/L	0.5		<0.5			<0.5		
Endrin	µg/L	0.5		<0.5			<0.5		
Endrin aldehyde	µg/L	0.5		<0.5			<0.5		
g-BHC (Lindane)	µg/L	0.5		<0.5			<0.5		
Methoxychlor	µg/L	2		<2.0			<2.0		
Aldrin + Dieldrin	µg/L	0.5		<0.5			<0.5		
chlordane	µg/L	0.5		<0.5			<0.5		
Endrin ketone	µg/L	0.5		<0.5			<0.5		
Organophosphorous Pesticides									
Chlorpyrifos	µg/L	0.5		<0.5			<0.5		
Chlorpyrifos-methyl	mg/L	0.0005		<0.0005			<0.0005		
Diazinon	µg/L	0.5		<0.5			<0.5		
Dichlorvos	µg/L	0.5		<0.5			<0.5		
Azinophos methyl	µg/L	0.5		<0.5			<0.5		
Ethion	µg/L	0.5		<0.5			<0.5		
Bromophos-ethyl	µg/L	0.5		<0.5			<0.5		
Malathion	µg/L	0.5		<0.5			<0.5		

		Lab Report Number	ES2021234	ES2021234		ES2021234	245159	
		Field ID	MW03A_200616	QC103_200616		MW01_200617	QC200_200617	
		Matrix Type	water	water		water	water	
		Date	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL						
Dimethoate	µg/L	0.5	<0.5			<0.5		
Carbophenothion	µg/L	0.5	<0.5			<0.5		
Chlorfenvinphos	µg/L	0.5	<0.5			<0.5		
Fenthion	µg/L	0.5	<0.5			<0.5		
Methyl parathion	µg/L	2	<2.0			<2.0		
Monocrotophos	µg/L	2	<2.0			<2.0		
Prothiofos	µg/L	0.5	<0.5			<0.5		
PAH								
Naphthalene	µg/L	1	<1.0	<5	0	<1.0	<1	0
Acenaphthene	µg/L	1	<1.0			<1.0		
Acenaphthylene	µg/L	1	<1.0			<1.0		
Anthracene	µg/L	1	<1.0			<1.0		
Benz(a)anthracene	µg/L	1	<1.0			<1.0		
Benzo(a) pyrene	µg/L	0.5	<0.5			<0.7		
Benzo(a)pyrene TEQ calc (Zero)	mg/L	0.0005	<0.0005			<0.0005		
Benzo(b+j)fluoranthene	mg/L	0.001	<0.0010			<0.0010		
Benzo(g,h,i)perylene	µg/L	1	<1.0			<1.0		
Benzo(k)fluoranthene	µg/L	1	<1.0			<1.0		
Chrysene	µg/L	1	<1.0			<1.0		
Dibenz(a,h)anthracene	µg/L	1	<1.0			<1.0		
Fluoranthene	µg/L	1	<1.0			<1.0		
Fluorene	µg/L	1	<1.0			<1.0		
Indeno(1,2,3-c,d)pyrene	µg/L	1	<1.0			<1.0		
PAHs (Sum of total)	µg/L	0.5	<0.5			<0.5		
Phenanthrene	µg/L	1	<1.0			<1.0		
Pyrene	µg/L	1	<1.0			<1.0		
PCBs								
PCBs (Sum of total)	µg/L	1				<1		
Pesticides								
Parathion	µg/L	2	<2.0			<2.0		
Demeton-S-methyl	µg/L	0.5	<0.5			<0.5		
Fenamiphos	µg/L	0.5	<0.5			<0.5		
Pirimphos-ethyl	µg/L	0.5	<0.5			<0.5		
TPH								
+C10-C36 (Sum of total)	µg/L	50	<50	<50	0	<50		
C10-C14	µg/L	50	<50	<50	0	<50	<50	0
C15-C28	µg/L	100	<100	<100	0	<100	<100	0
C29-C36	µg/L	50	<50	<50	0	<50	<100	0
C6-C9	µg/L	10	<20	<20	0	<20	<10	0
VOCs								
cis-1,4-Dichloro-2-butene	µg/L	5				<5		
Pentachloroethane	µg/L	5				<5		
trans-1,4-Dichloro-2-butene	µg/L	5				<5		

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

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

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

			Lab Report Number	ES2021234	ES2021234		ES2021234	245159	
			Field ID	MW03A_200616	QC103_200616		MW01_200617	QC200_200617	
			Matrix Type	water	water		water	water	
			Date	16/06/2020	16/06/2020	RPD	17/06/2020	17/06/2020	RPD
	Unit	EQL							
BTEX									
Total BTEX	µg/L	1		<1	<1	0	<1		
Xylene Total	µg/L	2		<2	<2	0	<2		
Benzene	µg/L	1		<1	<1	0	<1	<1	0
Ethylbenzene	µg/L	1		<2	<2	0	<2	<1	0
Toluene	µg/L	1		<2	<2	0	<2	<1	0
Xylene (m & p)	µg/L	2		<2	<2	0	<2	<2	0
Xylene (o)	µg/L	1		<2	<2	0	<2	<1	0
PFOS/PFOA									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005		<0.005	<0.005	0	<0.005		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005		<0.005	<0.005	0	<0.005		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	0	<0.000005	<0.00001	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/L	0.000005		<0.000005	<0.000005	0	<0.000005	<0.00002	0
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002		<0.002	<0.002	0	**0.009**		
Perfluorobutanoic acid (PFBA)	µg/L	0.01		<0.01	<0.01	0	<0.01		
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002		<0.002	<0.002	0	<0.002		
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002		<0.002	<0.002	0	**0.013**	<0.01	26
Perfluorohexanoic acid (PFHxA)	µg/L	0.002		<0.002	<0.002	0	**0.008**		
Perfluorooctanesulfonic acid (PFOS)	mg/L	0.000002		<0.000002	<0.000002	0	**0.000003**	<0.00001	0
Perfluorooctanoic acid (PFOA)	mg/L	0.000002		<0.000002	<0.000002	0	<0.000002	<0.00001	0
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.002	0	<0.002		
Sum of PFAS	µg/L	0.002		<0.002	<0.002	0	**0.033**	<0.01	107
Sum of PFAS (WA DER List)	µg/L	0.002		<0.002	<0.002	0	**0.033**		
Sum of PFHxS and PFOS	µg/L	0.002		<0.002	<0.002	0	**0.016**	<0.01	46
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01						<0.01	
Phenols									
2,6-D	mg/L	0.01		<0.01			<0.01		
Picloram	µg/L	10		<10			<10		
TRH									
C10-C16	µg/L	50		<100	<100	0	<100	<50	0
C10-C16 (F2 minus Naphthalene)	µg/L	50		<100	<100	0	<100	<50	0
C10-C40 (Sum of total)	µg/L	100		<100	<100	0	<100		
C16-C34	µg/L	100		<100	<100	0	<100	<100	0
C34-C40	µg/L	100		<100	<100	0	<100	<100	0
C6-C10	µg/L	10		<20	<20	0	<20	<10	0
C6-C10 (F1 minus BTEX)	µg/L	10		<20	<20	0	<20	<10	0
Metals									
Cadmium (filtered)	mg/L	0.0001		<0.0001	<0.0001	0	<0.0001	<0.0001	0
Arsenic (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.001**	**0.001**	0
Chromium (III+VI) (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.015**	**0.015**	0
Copper (filtered)	mg/L	0.001		<0.001	<0.001	0	**0.001**	<0.001	0
Lead (filtered)	mg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0
Mercury (filtered)	mg/L	0.00005		<0.0001	<0.0001	0	<0.0001	<0.00005	0
Nickel (filtered)	mg/L	0.001		**0.004**	**0.004**	0	<0.001	<0.001	0
Zinc (filtered)	mg/L	0.001		**0.364**	**0.490**	30	**0.015**	**0.017**	13
PAH									
Naphthalene	µg/L	1		<1.0	<5	0	<1.0	<1	0
TPH									
+C10-C36 (Sum of total)	µg/L	50		<50	<50	0	<50		
C10-C14	µg/L	50		<50	<50	0	<50	<50	0
C15-C28	µg/L	100		<100	<100	0	<100	<100	0
C29-C36	µg/L	50		<50	<50	0	<50	<100	0
C6-C9	µg/L	10		<20	<20	0	<20	<10	0

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

			Field ID	TRIP BLANK_01	TRIP BLANK_02	TRIP BLANK_03	TRIP BLANK_04	TRIP BLANK_05	TRIP BLANK_06
			Matrix Type	soil	soil	soil	soil	soil	soil
			Date	10/06/2020	10/06/2020	11/06/2020	11/06/2020	12/06/2020	12/06/2020
	Unit	EQL							
BTEX									
Total BTEX	mg/kg	0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene Total	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethylbenzene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (o)	mg/kg	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH									
C6-C10	mg/kg	10		<10	<10	<10	<10	<10	<10
C6-C10 (F1 minus BTEX)	mg/kg	10		<10	<10	<10	<10	<10	<10
PAH									
Naphthalene	mg/kg	1		<1	<1	<1	<1	<1	<1
TPH									
C6-C9	mg/kg	10		<10	<10	<10	<10	<10	<10

			Field ID	TB01_200615	TB02_200616	TB03_200617
			Matrix Type	water	water	water
			Date	15/06/2020	12/06/2020	12/06/2020
	Unit	EQL				
BTEX						
Total BTEX	µg/L	1		<1	<1	<1
Xylene Total	µg/L	2		<2	<2	<2
Benzene	µg/L	1		<1	<1	<1
Ethylbenzene	µg/L	2		<2	<2	<2
Toluene	µg/L	2		<2	<2	<2
Xylene (m & p)	µg/L	2		<2	<2	<2
Xylene (o)	µg/L	2		<2	<2	<2
TRH						
C6-C10	µg/L	20		<20	<20	<20
C6-C10 (F1 minus BTEX)	µg/L	20		<20	<20	<20
PAH						
Naphthalene	µg/L	1		<5	<5	<5
TPH						
C6-C9	µg/L	20		<20	<20	<20

Trip Spikes

Lab Report Number	Sample Type	Matrix Type	Field ID	Sampled Date/Time	Chem Name	Trip Spike Result	Trip Spike Control	LCL	UCL	Result Units	Spike Recovery %	Method Name	Sample Code
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Ethylbenzene	1.2	1.6			mg/kg	75	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Xylene (m & p)	3.3	4.3			mg/kg	76.744	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Toluene	9	12			mg/kg	75	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Xylene Total	4.6	5.9			mg/kg	77.966	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Benzene	< 0.2	0.3			mg/kg	66.667	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Xylene (o)	1.3	1.6			mg/kg	81.25	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Total BTEX	14.8	19.8			mg/kg	74.747	EP080: BTEXN	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	C6-C10	34	46			mg/kg	73.913	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	C6-C9	23	33			mg/kg	69.697	EP080/071: Total Petroleum Hydrocarbons	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	C6-C10 (F1 minus BTEX)	19	26			mg/kg	73.077	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_05	12/06/2020 15:00	Moisture Content	5.6	7.2			%	77.778	EA055: Moisture Content (Dried @ 105-110°C)	EM2010131030
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Ethylbenzene	1.4	1.6			mg/kg	87.5	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Xylene (m & p)	3.8	4.2			mg/kg	90.476	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Toluene	11.1	12.4			mg/kg	89.516	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Xylene Total	5.3	5.8			mg/kg	91.379	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Benzene	0.2	0.3			mg/kg	66.667	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Xylene (o)	1.5	1.6			mg/kg	93.75	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Total BTEX	18	20.1			mg/kg	89.552	EP080: BTEXN	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	C6-C10	41	48			mg/kg	85.417	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	C6-C9	31	35			mg/kg	88.571	EP080/071: Total Petroleum Hydrocarbons	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	C6-C10 (F1 minus BTEX)	23	28			mg/kg	82.143	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	EM2010131031
EM2010131	Trip_S	soil	TRIP SPIKE_06	12/06/2020 15:00	Moisture Content	6.8	7.2			%	94.444	EA055: Moisture Content (Dried @ 105-110°C)	EM2010131031
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Ethylbenzene	1.8	2.8			mg/kg	64.286	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Xylene (m & p)	4.7	14			mg/kg	33.571	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Toluene	14.6	17.9			mg/kg	81.564	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Xylene Total	6.3	19.4			mg/kg	32.474	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Benzene	0.3	0.3			mg/kg	100	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Xylene (o)	1.6	5.4			mg/kg	29.63	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	Total BTEX	23	40.4			mg/kg	56.931	EP080: BTEXN	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	C6-C10	66	89			mg/kg	74.157	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	C6-C9	44	75			mg/kg	58.667	EP080/071: Total Petroleum Hydrocarbons	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_01	10/06/2020 15:00	C6-C10 (F1 minus BTEX)	43	49			mg/kg	87.755	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020331041
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Ethylbenzene	2	3.9			mg/kg	51.282	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Xylene (m & p)	4.8	19.3			mg/kg	24.87	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Toluene	16.1	25			mg/kg	64.4	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Xylene Total	6.4	26.7			mg/kg	23.97	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Benzene	0.4	0.4			mg/kg	100	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Xylene (o)	1.6	7.4			mg/kg	21.622	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	Total BTEX	24.9	56			mg/kg	44.464	EP080: BTEXN	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	C6-C10	77	123			mg/kg	62.602	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	C6-C9	55	102			mg/kg	53.922	EP080/071: Total Petroleum Hydrocarbons	ES2020331042
ES2020331	Trip_S	soil	TRIP SPIKE_02	10/06/2020 15:00	C6-C10 (F1 minus BTEX)	52	67			mg/kg	77.612	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020331042
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Ethylbenzene	1.3	1.1			mg/kg	118.182	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Xylene (m & p)	3.4	3			mg/kg	113.333	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Toluene	10.5	9			mg/kg	116.667	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Xylene Total	4.6	4.1			mg/kg	112.195	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Benzene	< 0.2	< 0.2			mg/kg	100	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Xylene (o)	1.2	1.1			mg/kg	109.091	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	Total BTEX	16.4	14.2			mg/kg	115.493	EP080: BTEXN	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	C6-C10	42	32			mg/kg	131.25	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	C6-C9	28	24			mg/kg	116.667	EP080/071: Total Petroleum Hydrocarbons	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_03	11/06/2020 15:00	C6-C10 (F1 minus BTEX)	26	18			mg/kg	144.444	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020525048
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Ethylbenzene	1.5	1.4			mg/kg	107.143	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Xylene (m & p)	3.9	3.7			mg/kg	105.405	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Toluene	13.6	11.9			mg/kg	114.286	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Xylene Total	5.2	5			mg/kg	104	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Benzene	0.3	0.3			mg/kg	100	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Naphthalene	< 1	< 1			mg/kg	100	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Xylene (o)	1.3	1.3			mg/kg	100	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	Total BTEX	20.6	18.6			mg/kg	110.753	EP080: BTEXN	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	C6-C10	59	44			mg/kg	134.091	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	C6-C9	44	35			mg/kg	125.714	EP080/071: Total Petroleum Hydrocarbons	ES2020525049
ES2020525	Trip_S	soil	TRIP SPIKE_04	11/06/2020 15:00	C6-C10 (F1 minus BTEX)	38	25			mg/kg	152	EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions	ES2020525049

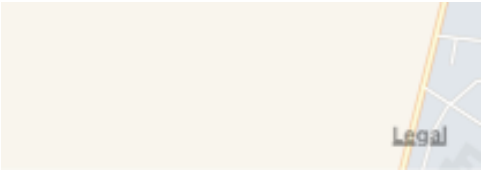
Trip Spike Recoveries. Where no lab LCL and UCL is available, user defined limits between 30% and 150% have been adopted for non-compliance.

Appendix M

Tip area walkover form

GENERAL SITE WALKOVER RECORD

Job No.:	J290300
Date & Time on site:	11 June 2020 at 12:29 pm
Attendees :	DC, Gav, Mitch
EMM Technician:	DC

Site location:	J200300
Location:	
	-35.15876 147.44810

OBSERVATIONS

Description of location:	Old tip looking North	Time:	12:30 pm

Landfill area is approx 30m long x 5m wide and around 3-4m deep

Description of location: Old tip location

Time: 12:31 pm

Full of drums of mixed types-oils, pesticides, petrol. Very odourous

Description of location: Old tip location

Time: 12:32 pm

Dead animals have been dumped

Description of location: Tip looking south

Time: 12:33 pm

Description of location: Tip contents

Time:

Water pooling in bottom of tip

Description of location: Time:

Description of location: Time:

Description of location: Time:

Description of location: Time:

Additional Comments: & Photos:

Site mud map

SITE WALKOVER MUD MAP