SH Gosford Residential Pty Ltd

Updated Detailed Site Investigation 26-30 Mann Street, Gosford NSW

Purpose:

To provide an updated detailed site investigation assessing the potential for contamination to exist as a result of current and/or historical activities and address data gaps relating to the potential reuse of soil material at the site.

Prepared for:

Frank Katsanevas

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Sign Off:		
Author:	Reviewer:	Approver:
		
Lochlan Browne	Matthew Konza	Ryan Jacka
HSE Consultant	HSE Consultant	Principal Consultant

STATEMENT OF LIMITATIONS

This document has been prepared in response to specific instructions from the client to whom the report has been addressed. The work has been undertaken with the usual care and thoroughness of the consulting profession. The work is based on generally accepted standards, practices of the time the work was undertaken. No other warranty, expressed or implied, is made as to the professional advice included in this report.

The report has been prepared for the use by the client and the use of this report by other parties may lead to misinterpretation of the issues contained in this report. To avoid misuse of this report, EDP advise that the report should only be relied upon by the client and those parties expressly referred to in the introduction of the report. The report should not be separated or reproduced in part and EDP should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure the report is not misused in any way.

EDP is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative estimates only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

Sampling Risks

EDP acknowledges that any scientifically designed sampling program cannot guarantee all subsurface contamination will be detected. Sampling programs are designed based on known or suspected site conditions and the extent and nature of the sampling and analytical programs will be designed to achieve a level of confidence in the detection of known or suspected subsurface contamination. The sampling and analytical programs adopted will be those that maximises the probability of identifying contaminants. The client must therefore accept a level of risk associated with the possible failure to detect certain subsurface contamination where the sampling and analytical program misses such contamination. EDP will detail the nature and extent of the sampling and analytical program used in the investigation in the investigation report provided.

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Soil contamination can be expected to be non-homogeneous across the stratified soils where present on site, and the concentrations of contaminants may vary significantly within areas where contamination has occurred. In addition, the migration of contaminants through groundwater and soils may follow preferential pathways, such as areas of higher permeability, which may not be intersected by sampling events. Subsurface conditions including contaminant concentrations can also change over time. For this reason, the results should be regarded as representative only.

The client recognises that sampling of subsurface conditions may result in some cross contamination. All care will be taken and the industry standards used to minimise the risk of such cross contamination occurring, however, the client recognises this risk and waives any claims against EDP and agrees to defend, indemnify and hold EDP harmless from any claims or liability for injury or loss which may arise as a result of alleged cross contamination caused by sampling.

Reliance on Information Provided by Others

EDP notes that where information has been provided by other parties in order for the works to be undertaken, EDP cannot guarantee the accuracy or completeness of this information the client therefore waives any claim against the company and agrees to indemnify EDP for any loss, claim or liability arising from inaccuracies or omissions in information provided to EDP by third parties. No indications were found during our investigations that information contained in this report, as provided to EDP, is false.

Recommendations for Further Study

The industry recognised methods used in undertaking the works may dictate a staged approach to specific investigations. The findings therefore of this report may represent preliminary findings in accordance with these industry recognised methodologies. In accordance with these methodologies, recommendations contained in this report may include a need for further investigation or analytical analysis. The decision to accept these recommendations and incur additional costs in doing so will be at the sole discretion of the client and EDP recognises that that the client will consider their specific needs and the business risks involved. EDP does not accept any liability for losses incurred as a result of the client not accepting the recommendations made within this report.

EXECUTIVE SUMMARY

SH Gosford Residential Pty Ltd (the Client) engaged EDP Consultants Pty Ltd (EDP) to conduct an updated Tier 1 Detailed Site Investigation (DSI) of the vacant lot located at 26-30 Mann Street, Gosford NSW (the site). This report is in response to the approved Masterplan SSD 10114 Clause C33. The objective of this updated DSI was to further characterise site soils, undertake a contamination assessment of the site and address data gaps relating to the waste classification and potential reuse of soil material at the site in light of upcoming works.

The site has an approximate area of 8,884 m^2 is legally defined as Lot 111 in Deposited Plan (DP) 1265226, Lot 469 in DP 821073, and Lots 2-7 in DP 14761.

The scope of works for this DSI included the following:

- Review of the existing environmental reports for the site and reports relating to the site history prior to 1954 (**Section 7.5**);
- Inspection of the site by EDP's qualified Environmental Scientists, to identify site characteristics that may be suggestive of site contamination;
- Excavation of 20 systematic test pits across the investigation area to a maximum depth of 1.5 m below ground level (mbgl) using a 3-tonne rubber tracked excavator;
- Excavation of 5 systematic boreholes across the investigation area to a maximum depth of 5.0 m below ground level (mbgl) using a track mounted drill rig;
- Collection of soil samples for chemical characterisation at each test pit and borehole location, including collection of quality control (QC) samples;
- Analysis of samples for CoPC at a National Associational of Testing Authorities, (NATA) Australia accredited laboratory, with the remainder on hold pending results;
- Comparison of soil analytical results against the adopted human health criteria for the site, in accordance with NEPM 2013;
- Comparison of results against the NSW ENM Order and NSW EPA *Waste Classification Guidelines: Part 1 – Classifying Waste, 2014*;
- Development of an Updated Conceptual Site Model (CSM) to rectify data gaps that required additional environmental information; and
- Preparation of this updated DSI report in accordance with relevant guidelines for contaminated lands assessment.

In summary, the sources of impact (areas of environmental concern) identified in the assessment area include:

- Uncontrolled historical filling; and
- Poor demolition practices.

Analytical results for the chemical contaminants indicated that concentrations of contaminants of potential concern (COPC) were generally less than the laboratory practical quantitative limits (PQLs) with the results less than the adopted investigation and screening levels for each sample analysed.

The intrusive investigation (test pits constructed with excavator) identified a fill layer of varying depth (0.5 m to 1.5 m) across the site, with varying quantities of foreign materials. The fill material at TP19 varied notably, comprising numerous anthropogenic inclusions of scrap metal, bricks, terracotta, timber, blue metal gravels and minor amounts of ACM fragments

No ACM was identified to the ground surface within the investigation area, within any other test pit locations or within soil samples submitted for laboratory analysis. EDP considers the asbestos contamination present at the site to be localised within the vicinity of TP19 given the subsurface profile varied significantly to that of the rest of the site.

The identification of localised ACM within the soil presents a risk to potential receptors, including site workers throughout the construction works, neighbouring site users and future occupiers of the site. These risks must be managed throughout the proposed construction and earthworks, to mitigate the risks posed to potential receptors. These risks must be managed under a site-specific Asbestos Management Plan (AMP) incorporated into a Construction

Environmental Management Plan. The level of contamination (extent and degree) is not considered significant enough to require the preparation of a RAP.

In-situ fill material at the site is currently not considered compliant with the NSW EPA *Excavated Natural Material Order 2014* and is currently not suitable for reuse due to exceedances of benzo(a)pyrene (BaP) and foreign materials. If during bulk earthworks sections of soil are determined to be visibly free of foreign materials, these soils should be stockpiled in a separate location on-site to allow for additional ENM assessment. This approach must ensure the unacceptable hotspots (those exceeding absolute maximum) are excluded from further assessment. Alternatively, in-situ soils at the site (excluding TP19) are classified as General Solid Waste (non-putrescible). Soils excavated from the asbestos hotspot identified at TP19 must be disposed offsite as Special Waste (asbestos waste) with chemical classification of General Solid Waste (non-putrescible).

Potential Acid Sulfate Soils (ASS) were identified within natural materials underlying the fill layer at the site. These ASS will be managed in accordance with the Acid Sulfate Soils Management Plan to be prepared for the site.

EDP concludes that based on the investigation results, the site is suitable for the proposed site works, subject to the development and implementation of an AMP prepared by a suitably qualified and experienced environmental professional. This AMP must be implemented throughout all earthworks undertaken at the site.

CONTENTS

1. INTRODUCTION

SH Gosford Residential Pty Ltd (the Client) engaged EDP Consultants Pty Ltd (EDP) to conduct an updated Tier 1 Detailed Site Investigation (DSI) of the vacant lot located at 26-30 Mann Street, Gosford NSW (the site). This report is in response to the approved Masterplan SSD 10114 Clause C33. The objective of this updated DSI was to further characterise site soils, undertake a contamination assessment of the site and address data gaps relating to the waste classification and potential reuse of soil material at the site in light of upcoming works.

The site has an approximate area of 8,884 m^2 and is legally defined as Lot 111 in Deposited Plan (DP) 1265226, Lot 469 in DP 821073, and Lots 2-7 in DP 14761.

Refer to **Figure 1** for the site location provided in **Appendix A**.

2. BACKGROUND

A mixed commercial land use has been proposed to be developed by the Client at the site. The development is to comprise the construction of a basement carpark covering the entire area and three multi-storey residential/commercial structures situated above the basement.

The development on this land has been carried out in three stages.

- Stage 1 – The newly constructed Australian Taxation Office building in the north;
- Stage 2 – The newly constructed residential building in the mid-east of the site; and
- Stage 3 – The remaining area of an irregular shape of 8,884 m^2 which is the study site of this DSI.

The Updated DSI is to be submitted to the Department of Planning, Industry and Environment (DPIE) on behalf of the SH Gosford Residential and in support of an application for SSD application number 23588910 at 26-30 Mann Street, Gosford. The SSDA seeks consent for:

- Demolition of the existing retaining wall on site.
- Removal of three trees located at the site interface with Baker Street.
- Excavation to a depth of approximately 1.3 m to accommodate the proposed ground floor structure.
- Earthworks to level the site in readiness for the proposed building.
- Construction of a 25-storey (26 level) mixed-use building, comprising:
  - 621sqm of retail GFA.
  - 136 apartments, equating to 13,263sqm of residential GFA.
  - Four parking levels for 183 cars, with vehicular access from Baker Street.
  - Storage areas and services.
  - Communal open space.
- Publicly accessible through site link, including stairs, walkways, public lift, public art and landscaping.

The area has been the subject of various investigations. A Preliminary Site Investigation (PSI) had been carried out by Douglas Partners (DP) in 2014 (*DP Ref: 75722.00,* dated March 2014) for the entire area before the public school was demolished. Later, a DSI was conducted by DP in November 2016 for the area of Stage 2 development (*DP Ref: 82945.01,* dated November 2016). The investigation identified areas with asbestos-containing material (ACM) across the central portion of the site and two exceedances of the *National Environment Protection (Assessment of Site Contamination) Measure (NEPM), Amendment,* 2013 (NEPM 2013) Tier 1 ecological screening level (ESL) for contaminant of potential concern (CoPC) benzo(a)pyrene (BaP) in a limited area of surficial soil in the north-east corner. Acid Sulfate Soil (ASS) and Potential ASS (PASS) were also identified in shallow soils near the southern extent of the footprint of Stage 2. The Remediation Action Plan was prepared by Cardno in June 2017 (*Cardno Ref: CGS3311,* dated June 2017) to guide and inform the remediation of soils for Stage 2 development. Additional limited soil investigation identified ACM in localised areas across the central portion of the Stage 2 site, confirming the findings of the DSI. The analytical results showed that BaP was detected at concentrations above the NEPM 2013 ESL in the samples from the southern portion of the footprint. In September 2017, Cardno advanced additional

boreholes and test pits for soil assessment and classification (*Cardno Ref: CGS3311_500_L003,* dated September 2017). ACM was detected in the surface soils but not in the natural soil. Natural soil across the site below a depth approximately ranging from 1.5 to 5.0 m below ground level (mbgl) was noted to meet the definition of Excavated Natural Material (ENM).

For the Stage 3 development (the subject of this study), Cardno completed a PSI in 2017 (report not provided) and Coffey conducted a DSI as well as the geotechnical investigation assessment in 2018 (updated in 2019) (*Coffey Ref: SYDGE214942-AC_Rev4,* dated August 2019). Coffey concluded in its DSI report that the areas of environmental concern did not present an unacceptable health or environmental risk to the intended receptors with respect to the proposed development. The analytical results of soil samples showed that BaP exceeding the NEPM health investigation level (HIL) B was detected at BH8 (0-1 m). Asbestos was not detected in collected samples. The groundwater results showed that only copper (Cu) exceeded the adopted groundwater investigation levels, and all hydrocarbon compounds were detected below the limit of reporting with the exception of naphthalene. A small batch of soil samples was selected for SPOCAS analysis and the results indicated that the samples did not contain potential and actual ASS.

Coffey noted in the DSI report that there was a low likelihood of widespread unacceptable impacts associated with hazardous building materials (e.g., asbestos and lead), site fill, hazardous ground gas, and ASS. Based on chemical characterisation of the site soils, Coffey considered that the site fill and near surface soil, if not mixed with asbestos or other materials, could be classified as general solid waste. However, the results of ASS assessment may have been impacted by storage of concrete/cement on site which are generally alkaline in nature and there are recorded detections of ASS on site in the wider development (reported for Stage 1 and 2 development). Asbestos fragments were identified before and the risk of detection of ACM in the surface fills could not be precluded particularly for the area close to the Stage 2 site.

To address the potential contaminations, The Client has engaged EDP to undertake an investigation across the entire site to undertake a contamination, ENM and ASS assessments of both fill and natural soils and develop this updated DSI.

3. OBJECTIVES

The objectives of the updated DSI were to:

- Prepare an updated DSI report in consideration of the National Environment Protection (Assessment of Site Contamination) Measure 1999 (amended in April 2013), NEPC 2013, Canberra;
- Assess the potential for soil contamination to exist at the site and where present, delineate and characterise the extent of contamination;
- Determine the suitability of the site for the proposed development, including any additional investigations or remedial actions that may be required; and
- Assess the in-situ soil at the site in accordance with the NSW EPA *Excavated Natural Material Order 2014* (NSW ENM Order) to determine the suitability of the material for beneficial reuse or alternatively to classify the in-situ soil to facilitate offsite disposal of the material, where required.

4. SCOPE OF WORKS

The scope of works for this DSI included the following:

- Review of the existing environmental reports for the site and reports relating to the site history prior to 1954;
- Preparation of a Site Safety Plan (SSP) and Safe Work Method Statement (SWMS);
- Dial Before You Dig (DBYD) search;
- Supervision of underground service location undertaken by a Telstra accredited sub-contractor;
- Inspection of the site by EDP's qualified Environmental Scientists, to identify site characteristics that may be suggestive of site contamination;
- Excavation of 20 systematic test pits across the investigation area to a maximum depth of 1.5 m below ground level (mbgl) using a 3-tonne rubber tracked excavator;

- Excavation of 5 systematic boreholes across the investigation area to a maximum depth of 5.0 m below ground level (mbgl) using a track mounted drill rig;
- Collection of soil samples for chemical characterisation at each test pit and borehole location, including collection of quality control (QC) samples;
- Analysis of samples for CoPC at a National Associational of Testing Authorities, (NATA) Australia accredited laboratory, with the remainder on hold pending results;
- Comparison of soil analytical results against the adopted human health criteria for the site, in accordance with NEPM 2013;
- Comparison of results against the NSW ENM Order and NSW EPA *Waste Classification Guidelines: Part 1 – Classifying Waste, 2014*;
- Development of an Updated Conceptual Site Model (CSM) to rectify data gaps that required additional environmental information;
- Preparation of this updated DSI report in accordance with relevant guidelines for contaminated lands assessment; and
- Proposal of additional assessments or suitable remedial and validation strategies for the site, if required.

5. TECHNICAL FRAMEWORK

- NSW *Work Health and Safety Act 2011*;
- NSW *Work Health and Safety Regulation 2017;*
- *Contaminated Land Management Act 1997*;
- *State Environmental Planning Policy No. 55 - Remediation of Land*;
- NSW EPA Guidelines for Consultants Reporting on Contaminated Land (April 2020);
- NSW EPA Guidelines for the Site Auditor Scheme, 3rd Edition (2017);
- NSW EPA *Protection of the Environment Operations (POEO) Act 1997*;
- NSW EPA *POEO (Waste) Regulation 2014;*
- NSW EPA *Excavated Natural Material Order, 2014* (ENM Order);
- NSW EPA *Waste Classification Guidelines: Part 1 – Classifying Waste, 2014*;
- NSW EPA *Contaminated Sites Sampling Design Guidelines, 1995*;
- *National Environment Protection (Assessment of Site Contamination) Measure, Amendment, 2013*;
- Australian Standard (AS) 4482.1 *Guide to Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile Compounds, 2005*;
- AS 4482.2 *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances, 1999*; and
- AS 4964 *Method for the qualitative identification of asbestos in bulk samples, 2004*.

6. PREVIOUS ENVIRONMENTAL INVESTIGATIONS

The following previous environmental investigations provided to EDP were reviewed as part of the assessment.

6.1 Douglas Partners Preliminary Site Investigation (Douglas Partners 2014)

The Client has provided EDP with a previous preliminary site investigation (PSI) undertaken by Douglas Partners of the wider 20 Mann Street site (covering Stages 1, 2 and 3 of the development footprints) (*Douglas Partners Ref:75722.00,* dated March 2014).

A summary of the prudent information obtained from Douglas Partners 2014 is as follows:

The investigation included a limited site history review and a preliminary sampling and laboratory analytical program. At the time of the investigation, the investigation area was occupied by Gosford Public School, which comprised classrooms, offices and amenity buildings, with the remaining areas comprising a mix of concrete or

asphalt pavements, gardens or grassed areas. The investigation identified two chemical storage rooms within the school. Both were reported to comprise security access doors and concrete slab floors. No spillage incidents were reported.

Historical aerial photographs reviewed by DP indicated that the PSI investigation area had been occupied by the school prior to 1954 (earliest available aerial photograph).

The following areas of environmental concern (AEC) were identified by Douglas Partners 2014:

- Low to moderate potential for presence of contamination in areas of filling across the PSI investigation area;
- Low to moderate potential for presence of remnants/weathering of hazardous building materials across the majority of the PSI investigation area;
- Very low potential for presence of contamination due to incidental spillage of stored chemicals (areas not clearly reported by Douglas Partners); and
- Low to moderate potential for presence of contamination due to incineration of waste in the north eastern portion of the site (within adjacent development footprint, outside current development footprint, thus not further discussed in the PSI report).

In addition, Douglas Partners identified potential presence of hazardous ground gases in the western/central portions of the PSI investigation area, due to decomposition of organic matter with the alluvial soil profile.

- Douglas Partners subsequently undertook a preliminary intrusive investigation comprising 26 borehole locations across the wider PSI investigation area, 13 of which were (Bores 2 to 8, 13, and 22 to 26) were located within the Stage 3 footprint.
- From these 13 boreholes, a total of 16 shallow soil (typically top 0.5m) and one surface fibre cement sample were collected. The majority of the 16 samples were analysed for a broad suite of contaminates of potential concern (CoPC). The fibre cement sample collected at borehole 26 was analysed for asbestos.
- Concentrations of analytes were detected below the adopted low-density residential health based investigation levels (HIL-A and HSL-A). Asbestos was not detected in the samples analysed with the exception of one asbestos detection in the fibre cement sample collected at borehole 26 located at the south-eastern corner.
- Hazardous ground gas monitoring was undertaken at Bores 4, 6, 8, and 23 within the Stage 3 footprint. Detectable levels of methane were recorded in Bore 23 at concentrations below the adopted screening level of 1.25 %.

Based on the findings Douglas Partners concluded that isolated asbestos fragments were identified on the ground surface, including Bore 26 located at the south-eastern corner of the Stage 3 footprint. The asbestos fragments were likely associated with demolition of former structures at the site, and considered the asbestos impact was not widespread.

Douglas Partners recommended the implementation of an Unexpected Find Protocol to manage the asbestos risks during site clearance and demolition. Following the demolition, the site surface should be reassessed for asbestos contamination.

Organic materials present within the subsurface are generating methane gas. Douglas Partners recommended that further assessment be carried out to address the potential methane impacts.

6.2 Coffey Detailed Site Investigation (Coffey 2019)

In 2018 St Hillers engaged Coffey Services Australia Pty Ltd (Coffey) to undertake a contamination Detailed Site Investigation of the stage 3 development site (*Coffey Ref: SYDGE14942-AC_Rev4,* dated August 2019) (Coffey 2019). The investigation included the excavation of nine geotechnical soil boreholes (BH1 to BH9), eight push tube holes (P1-P8), three test pits (TP1-TP3), five surface sample locations (SS1-SS5) and two hand auger boreholes (HA1-HA2). Three geotechnical boreholes were subsequently converted into groundwater monitoring wells and hazardous gas monitoring wells (MW1-3). During the assessment construction equipment and stored materials were on site which presented limitations for this DSI as the footprints of these areas could not be assessed.

The following AEC associated with land contamination were identified by Coffey 2019:

- Remnant hazardous building materials;
- Incidental spillage at chemical storage rooms;

- Contamination in site fill; and
- Hazardous ground gas.

A summary of the information obtained by Coffey 2019 that is relevant to this updated DSI includes the following:

- Based on field observations, a layer of fill was encountered across the majority of the site up to depths of 1.6 mbgl (but typically less than 1 mbgl).
- Concentrations of chemicals analysed were below the adopted soil investigation levels (HIL-B, HSL-B, Residential Management Limits), with the exception of carcinogenic PAH (as benzo(a)pyrene TEQ) at one location (BH8 0.0-1.0 m) at a concentration of 5.3 mg/kg marginally above the HIL-B of 4 mg/kg.
- With the exception of copper, concentrations of chemicals analysed were below the adopted groundwater investigation levels (protection of marine aquatic ecosystem, recreational water, HILB HSL-A/B) and, specifically, hydrocarbon compounds were detected below laboratory limits of reporting (LOR) with the exception of naphthalene. Trace levels of naphthalene were detected at concentrations up to 0.00017 mg/L (MW2), below the USEPA Tap water criteria.
- Copper (0.002 mg/l) within one groundwater location (MW2) marginally exceeded the investigation level for protection of marine aquatic ecosystem of 0.0013 mg/L. However, the detected concentration is considered typical of background concentration in an urban setting.
- Methane was detected up to 0.7 % (v/v), below the adopted screening level of 1.25 %. No positive gas flow was recorded in any of the wells monitored.
- pH-FOX were detected above pH3 with the exception of one sample and sulfur (KCl extractable) and Peroxide Oxidisable Sulfur were both detected below laboratory's limits of reporting.
- A preliminary waste classification assessment of General Solid Waste was provided for the site fill provided the material was not mixed with asbestos, pending further confirmation testing including toxicity characteristic leaching procedure (TCLP).

Based on the findings, Coffey considered the site can be made suitable for the proposed mixed use residential/commercial development, subject to the following:

- Offsite disposal of basement excavation be managed in accordance with Waste Classification Guidelines and regulations. Following the removal of the construction equipment and material sorted during the DSI, an additional assessment should be carried out comprising a visual assessment of the footprints of the construction equipment and material storages as well as confirmation sampling and laboratory testing of the fill and surface soils to supplement the preliminary waste classification.
- Coffey also recommended implementation of an Unexpected Finds Protocol during excavation and construction, to address potential presence of asbestos (if any) and to mitigate risks associated with new finds of previously undetected contamination.

7. SITE INFORMATION

7.1 Site Identification

Site identification details are summarised in **Table 1** and the location of the site is shown on **Figure 1,** provided in **Appendix A.**

Table 1: Site Identification

Site Identification	
Site Address:	26-30 Mann Street, Gosford NSW
Legal Identification:	Lot 111 in DP 1265226, Lot 469 in DP 821073, Lots 2-7 in DP 14761.
Local Government Area	Central Coast Council
Site Area:	8,884 m^2
Current Zoning:	B4 – Mixed Use under the State Environmental Planning Policy (Gosford City Centre) 2018

Site Identification	
Former Land Use	The site was the former Gosford Public School until its demolition in 2014. More recently, the site has been used as a construction yard, temporary offices, car parking and storage for the adjoining Stage 1 and 2 developments.
Current Land Use:	Vacant land
Locality Map	**Figure 1**
Site Layout	**Figure 2**

7.2 Site Description

The site description is based on visual observations made during fieldworks undertaken by EDP environmental consultants on the 1 October and 2 October 2020:

- Access to the site is from Vaughan Avenue, off Dane Drive.
- The site is predominantly vacant having recently been used as a construction yard for Stages 1 and 2 of the development.
- Site surfacing was predominantly asphalt hardstand and gravels with patchy grass cover present within the north east boundary.
- A shipping container was located adjacent the eastern boundary and minor amounts of stored building materials remained within the central portion of the site.
- A concrete crib retaining wall was situated along the eastern boundary with an approximate height of 2m.
- Large mature trees were present within the eastern boundary of the site adjacent the crib wall.
- No staining or asbestos fragments were visible to the ground surface at the site.
- The site was generally flat with a sloped earthen mound present within the eastern boundary to the crib wall.
- Numerous building materials were observed within the earthen mound surface soils (bricks, tiles, crushed concrete etc).

7.3 Surrounding Land Use

The site was located in the immediate vicinity of a mixed commercial/public recreational area within the suburb of Gosford. The site was bound to the:

- North and north east by recently constructed commercial buildings (Stage 1 and 2 of the development).
- East by Mann Street and multiple commercial buildings to the east of Mann Street;
- South by Vaughan Avenue, beyond which is Gosford Park.
- West by Gosford City Park.

7.4 Historical Aerial Photograph Review

The following historical descriptions of the site have been based on available online resources, in addition to aerial photographs described within Douglas Partners 2014.

Table 2: Historical Land Use

Year:	Description of Site:
1954	The site comprises Gosford Public school with a number of large buildings (classrooms) present within the western and central sections of the site. The remaining portion of the site comprises hardstand with vegetation and mature trees along the eastern perimeter.
1966	The site remained unchanged from the previous image.
1975	Some small buildings within the school appear to have either been constructed or removed since the 1966 photograph.
1994	The site appears to have generally remained unchanged, with the exception of some additional buildings (classrooms) visible adjacent to both the eastern and western boundaries within the southern portion of the site.
2002	The site remained unchanged from the previous image.

7.5 Site History Prior to 1954

The Client provided EDP with a Baseline Archaeological Assessment undertaken by Archaeological Management and Consulting Group (AMAC Group) of the site (*AMAC Group Ref: Baseline Archaeological Assessment – Central Coast Quarter – 26 Mann St, Gosford NSW,* dated August 2019) (AMAC Group 2019).

A summary of the prudent information obtained from AMAC Group 2019 is as follows:

- The northern portion of the site was part of land used as police paddocks from the 1840's.
- The southern portion of the site was part of three original land grands that were used as privately-owned paddocks.
- No development occurred on the site until the mid-20th century when the Gosford Public School was established.

8. ENVIRONMENTAL SETTING

8.1 Topography and Drainage

A review of the NSW Government National Map online database (http://www.nationalmap.gov.au/) accessed 14 October 2020, indicated that the site is located at an elevation of approximately 3 m Australian Height Datum (AHD) across the site. The earthen mound adjacent the eastern boundary is located at an elevation of approximately 6m AHD. Surface water from the site is anticipated to discharge to the south west towards Brisbane Waters.

8.2 Regional Geology

A review of the 1:100,000 Central Coast Coastal Quaternary Geological Map, indicated that the soils within the eastern portion of the site are generally underlain by Terrigal Formation (Rnt) comprising residual clays overlaying interbedded siltstone, shale and fine to coarse grained quartz-lithic sandstone with minor claystone lenses. The western portion of the site is generally underlain by disturbed terrain and alluvium.

8.3 Acid Sulfate Soils

A review of Acid Sulfate Soil information contained within the online Australian Soil Resource Information System (ASRIS) database (http://www.asris.csiro.au/index_ie.html), accessed on 14 October 2020, indicated there was a high probability/high confidence of acid sulfate soils occurring beneath the site.

Further review of Council's Acid Sulfate Soils Risk Map indicates that the site is situated within Class 2 Terrain. Class 2 terrain indicates that development consent is required where works are expected to occur below the natural ground surface, or by which the water table is likely to be lowered.

Based on the intrusive sampling/investigation conducted at the site, potential acid sulfate soils are known to exist within the natural subsoil materials underlying the fill at the site. The management of Acid Sulfate Soils at the site are to be managed under a site specific Acid Sulfate Soils Management Plan (ASSMP) to be prepared for the site.

8.4 Hydrology

A review of the New South Wales Department of Primary Industries (DPI) Office of Water Groundwater Works database online (http://allwaterdata.water.nsw.gov.au/water.stm) accessed 14 October 2020, indicated that there were two licensed groundwater bores situated within 500m of the site. Standard water levels were not reported. A summary of the bores is presented in **Table 2**. Given the proximity to Brisbane Water, shallow groundwater subject to tidal influence, likely flowing in a west to south-westerly direction towards Brisbane Water, is expected in the underlying alluvial profiles.

Table 2: Summary of Local Licensed Groundwater Bores

Bore ID	Location	Total Depth	Approved Use
GW201892	100 m northwest	78 m	Recreational (irrigation of playing fields)
GW201679	150 m northwest	102 m	License cancelled

8.5 Proximity to Local Sensitive Environments

No surface water bodies were noted to be present at the site. The nearest offsite sensitive receptor appears to be Brisbane Water, approximately 150m to the south west of the site.

8.6 Public Records

8.6.1 NSW EPA Contaminated Lands Database

A search of the NSW Environmental Protection Authority public register of Notices issued under the Contaminated Land Management Act 1997 accessed 15 October 2020 indicated nothing registered for the Site. The closest registered site is located approximately 1.1 km west of the site. The register was searched for Central Coast Council local government authority.

8.6.2 NSW EPA Contaminated sites Notified to EPA

A search of the NSW Environmental Protection Authority public register of Contaminated Sites Notified to the EPA accessed 15 October 2020 indicated that nothing registered for the Site. The closest registered site is located approximately 1.1 km west of the site.

9. PRELIMINARY CONCEPTUAL SITE MODEL

A Preliminary conceptual site model (CSM) was developed based on the information obtained during the preliminary investigation process, to allow assessment of potential sources of impact, chemicals of concern, transport mechanism and receptors.

9.1 Areas of Environmental Concern

Based on the information gathered during the desktop study and visual observations made during the site inspection, Areas of Environmental Concern (AEC) and associated Contaminants of Potential Concern (CoPC) are summarised in **Table 3**.

Table 3: Contaminants of Potential Concern

AEC	Potential Source	CoPC
Site surface	Poor demolition practices of former structures	Hazardous building materials
Fill material across the site.	Uncontrolled historic filling	Heavy metals, TRH, BTEXN, PAHs, OCP/OPP, PCBs and asbestos.

TRH - Total recoverable hydrocarbons;
BTEXN - Benzene, toluene, ethylbenzene, xylenes and naphthalene;
PAHs - Polycyclic aromatic hydrocarbons;
OCP/OPP - Organochlorine, organophosphate pesticides; and
PCBs - Polychlorinated Biphenyls.

9.2 Potential Transport Medium

The anticipated primary transport media for the migration of contaminants of concern are:

- Migration of contaminated material through erosion and dust during construction works; and
- Contaminant movement through surface water runoff.

9.3 Potential Receptors

Considering the planned soil disturbance during upcoming works and the potential sources of contamination outlined above, the potential receptors from contamination, if present, were considered to comprise:

- Workers on-site during excavation, construction or maintenance works;
- Future site users/occupants;
- Occupiers/visitors to surrounding sites; and
- Terrestrial ecosystems (particularly transitory wildlife) from direct uptake and diffusion of CoPC in soil.

9.4 Potential Migration Pathways

There are several mechanisms by which identified receptors may come into contact with contaminated sources, including the following:

- Inhalation of contaminants in potentially impacted soil;
- Direct contact (dermal or incidental ingestion) of potentially contaminated soil/hazardous building materials;
- Surface runoff and stormwater drainage system; and
- Direct uptake and diffusion of CoPC in soil (terrestrial ecosystem).

10. SOIL ASSESSMENT CRITERIA

To assess the significance of contaminant concentrations in soil, reference was primarily made to NEPM 2013, specifically 'Schedule B1 Guideline on Investigation Levels for Soil and Groundwater' (Schedule B1) for assessment criteria, where available. Schedule B1 provides a framework for the use of investigation and screening levels based on human health and ecological risks. In the absence of relative criteria in NEPM 2013, reference was made to other nationally or state endorsed guidelines.

National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013) (NEPC 2013, Canberra) (hereafter NEPM) provides a national framework for conducting assessments of contaminated sites in Australia.

The purpose of the NEPM is to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry.

The NEPM addresses assessment of contamination and does not provide specific guidance on prevention of site contamination. The desired environmental outcome for the NEPM is to provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

NEPM provides a framework for the use of investigation and screening levels for the protection of human health, ecosystems, groundwater resources and aesthetics. Investigation levels and screening levels are applicable to this site assessment. The adopted investigation and screening levels for this assessment are as follow:

i) Health Investigation Levels (HILs); and

ii) Health Screening Levels (HSLs).

These assessment criteria are discussed in the sections below.

Given the proposed basement slab will generally cover the entire site, ecological investigation levels (EIL) and ecological screening levels (ESL) have not been considered for this assessment.

10.1 Health Investigation Levels

HILs are scientifically based, generic assessment criteria designed to be used in the Tier 1 assessment for assessing human health risk via all relevant pathways of exposure. HILs are designed to be intentionally conservative and based on a reasonable worst-case scenario for the following generic land use settings:

A Residential with garden/accessible soil (home grown produce contributing less than 10% of vegetable and fruit intake; no poultry) - this category includes children's day-care centres, preschools, and primary schools.

B **Residential with minimal opportunities for soil access, including dwellings with fully and permanently paved yard space such as high-rise apartments and flats.**

C Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves), which should be subject to a site-specific assessment where appropriate.

D Commercial/industrial includes shops and offices as well as factories and industrial sites.

Due to the proposed site use, for mixed residential (high density) and commercial purposes contaminant concentrations will be assessed against the HIL applicable to high density residential land use (HIL-B) from the NEPM 2013.

10.2 Health Screening Levels

NEPM 2013 adopts the Health Screening Levels (HSLs) for various petroleum hydrocarbon compounds developed by the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE).

The HSLs apply to the same landuse scenarios as the HILs, with additional consideration of soil texture and depth to determine the appropriate soil, groundwater and soil vapour criteria.

The NEPM 2013 provides HSL fractions and corresponding equivalent carbon range for petroleum hydrocarbon compounds. HSLs are given only for F1, F2 and BTEX as the heavier petroleum compounds of F3 and F4 are non-volatile and do not pose a concern for vapour intrusion. However, exposure can be via direct contact pathways (dermal contact, incidental oral ingestion and dust in halation). Friebel and Nadebaum 2011 provides the HSLs for direct contact, however for most site assessments, these levels are unlikely to trigger further investigation or site management as the values are substantially higher than most soil screening levels.

Table 4 – Health Screening Levels for TRH Contaminants

Fraction Number	Equivalent Carbon Number Range
F1	*C6 – C10*
F2	*>C10 – C16*
F3	*>C16 – C34*
F4	*>C34 – C40*

As discussed above, HSLs for soil, groundwater and soil vapour have been developed based on soil texture. The HSLs assume a uniform soil profile and the highest proportion of the soil texture from the soil profile should be used selecting the appropriate HSLs. For Tier 1 soil assessment, the HSL classifications of sand, silt and clay may be broadly applied to soil texture classification in Table A1 of Australian Standard 1726 as follow:

Coarse grained soil: >50% of particles (by weight) <63mm and >0.075mm

- Sand: >50% of particles (by weight) <2.36mm; or
- Gravel: >50% of particles (by weight) >2.36mm.

Fine-grained soil: >50% of particles (by weight) <0.075mm

- Silts and clays (liquid limit >50%);
- Silts and clays (liquid limit <50%); or

- Highly organic soils.

10.3 Resource Recovery and Waste Classification

For the purposes of this assessment, reference has also been made to the criteria provided in the NSW EPA *Excavated Natural Material Order 2014* (NSW ENM Order), to determine whether the in-situ material on-site is suitable for beneficial reuse.

The adopted ENM criteria for this assessment is outlined in **Table D2** provided in **Appendix B**.

10.3.1 Waste Classification

Reference was made to the NSW EPA Waste Classification Guidelines criteria to assess the offsite disposal classification of the in-situ soils at the site. Waste can be classified as:

- General solid waste.
- Restricted solid waste.
- Hazardous waste.
- Special Waste (including asbestos waste, waste tyres and clinical waste).

Chemical contaminants were compared with the contaminant threshold (CT) values outlined in the NSW Waste Classification Guidelines. If a waste's specific contaminant concentration (SCC) value exceeded a CT, further assessment using toxicity characteristic leaching procedure (TCLP) test was conducted.

If any SCC or TCLP threshold values were exceeded for general solid waste, the waste must be classified as restricted solid waste. If any SCC or TCLP threshold values were exceeded for restricted solid waste, the waste must be classified as hazardous waste.

The adopted waste classification criteria for this assessment is outlined in **Table D3** provided in **Appendix B**.

10.4 Assessment Criteria Summary

Soil health investigation levels (HILs), soil health screening levels (HSLs) and petroleum hydrocarbon management limits were adopted from Schedule B1 of NEPM 2013. Schedule B1 provides a framework for the use of investigation and screening levels based on human health and ecological risks. In the absence of relative criteria in NEPM 2013, reference was made to other nationally or state endorsed guidelines, including CRC CARE 2011.

The following points summaries the key legislation used as reference for the conclusions in this report:

- Soil HILs were used to assess human health risk via all relevant exposure pathways of exposure for metals and organic substances. HILs are concentrations below which contaminants in soils are not considered to adversely affect human health and are based on differing land use scenarios;
- Soil HSLs for selected petroleum compounds and fractions were considered applicable to assessing human health risk via vapour intrusion and inhalation. Criteria relevant to a course grained soil type and depths of 1 to 2 m were selected based on a conservative approach and the proposed depths associated with planned earthworks at the site; and
- Soil HSLs were also adopted from CRC CARE 2011 were used to assess the exposure pathway of direct contact (oral ingestion, dermal contact, and dust inhalation) for workers (maximum depth of 1.0 m) and vapour intrusion for intrusive maintenance workers. As a conservative approach, a sandy soil type and depth of 0-<2 m was adopted.

The HILs and HSLs adopted are outlined in **Table D1.**

11. SOIL SAMPLING, ANALYSIS PLAN AND SAMPLING METHODOLOGY

11.1 Analytical Results

The details of the sampling team (see Error! Reference source not found.) and duties were as follows:

Sample collector:

- Soil sample collection according to sampling regime;
- Described soil horizon features;
- Responsible for decontamination between sampling;
- Identified testing location and depth of profiles;
- Labelled sample containers;
- Recorded field conditions current at sampling into the sample log;
- Recorded soil profile information;
- Nominated field duplicates at the nominated ratio; and
- Recorded analytes to be tested for each sample.

Table 6 – Sampling Team Personnel

Personnel	Position	Qualifications	Project Task
Matthew Konza	HSE Consultant	Bachelor of Science Workcover Construction Work in NSW (White Card) Manual Handling Training	Conduct site observation and visual assessment Contractor Instruction Sampling Location Selection Soil Sampling Record soil description
Lochlan Browne	HSE Consultant	Bachelor of Science Masters of Environmental Science Workcover Construction Work in WA (White Card) Senior First Aid Certificate Manual Handling Training	Conduct site observation and visual assessment Soil Sampling Record soil description

11.2 Sampling Regime

The fieldwork for the assessment was devised to address the issues identified as potential for contamination as detailed in Section 9. The sampling objective was to gather information with regard to the type, location, level and extent of potential contamination due to the historical landuses at the site to determine the suitability of the material for reuse. This process provided sufficient supporting data (according the DQO's) to allow recommendations to be made on whether the possible site contamination is compliant with the proposed landuse and the environmental concerns.

For this assessment, the selection of the sampling locations was formed based on a systematic sampling pattern. Samples were collected based loosely on a gridded pattern in locations accessible for sampling, with sampling locations relatively well distributed across the site. When selecting sample locations, consideration was given to the sample locations of the previous environmental assessment conducted at the site. The sampling density adopted for the assessment was consistent with the minimum sampling density recommended for site characterisation based on detection of impacted soil hotspots with a diameter of approximately 25.0 m with 95% confidence, using a systematic 'grid-based' sampling pattern as described in NSW EPA 1995, AS4482.1-2005 and NEPM 2013 for an investigation area of 8,884 m^2.

Details of the samples collected and analysed as part of this investigation are provided in **Table 7** below. Details of the samples collected and analysed as part of this investigation are provided in **Appendix E.**

Table 7 – Soil Sample Location and Justification

Sample Location	Date	Justification
TP01	1 October 2020	Within area of historical filling
TP02	1 October 2020	Within area of historical filling
TP03	1 October 2020	Within area of historical filling
TP04	1 October 2020	Within area of historical filling
TP05	1 October 2020	Within area of historical filling
BH01	2 October 2020	Within natural soils suspected to be ASS
TP06	1 October 2020	Within area of historical filling

Sample Location	Date	Justification
TP07	1 October 2020	Within area of historical filling
BH05	2 October 2020	Within natural soils suspected to be ASS
TP08	1 October 2020	Within area of historical filling
TP09	1 October 2020	Within area of historical filling
TP10	1 October 2020	Within area of historical filling
TP11	1 October 2020	Within area of historical filling
TP12	1 October 2020	Within area of historical filling
TP13	1 October 2020	Within area of historical filling
BH02	2 October 2020	Within natural soils suspected to be ASS
TP14	1 October 2020	Within area of historical filling
TP15	1 October 2020	Within area of historical filling
BH03	2 October 2020	Within natural soils suspected to be ASS
TP16	1 October 2020	Within area of historical filling
BH04	2 October 2020	Within natural soils suspected to be ASS
TP17	1 October 2020	Within area of historical filling
TP18	1 October 2020	Within area of historical filling
TP19	1 October 2020	Within area of historical filling
TP20	1 October 2020	Within area of historical filling

11.3 Chemical Contaminant Sample Collection - Soil

Sampling of soils was conducted using the following methodology:

- Visual inspection for indications of contamination within test pits and on the site surface during sampling, ensuring any visually contaminated media is assessed;
- Samples were collected within areas identified to have a potential impact from former and/or current site uses;
- Sample collection was conducted on a systematic based sample regime (see **Figure 2**);
- Soil samples were recovered from each sample location using plant equipment (excavator / ute mounted drill rig);
- Samples collected directly from the excavator bucket/ drill rig augur, with an intent to collect only media that had not come into direct contact with any equipment, ensuring no cross contamination was occurring;
- Soil samples were collected in laboratory supplied 250 mL glass jars and foreign material bags;
- Excess soil was backfilled and trackroll compacted; and
- Samples were then placed in a chilled container and forwarded to a NATA registered laboratory for analysis under Chain of Custody (COC) conditions. A copy of the COC is provided in **Appendix F**. The laboratory issued confirmation of sample receipt intact.

11.3.1 Suspected Asbestos Containing Material Fragments

Several ACM fragments (3–4 fragments) were observed within the media excavated from TP19. A single suspected ACM fragment was collected as part of the investigation (AS001). The fragment was then placed in the airtight container and transported to a NATA registered laboratory for analysis under Chain of Custody (COC) conditions. A copy of the COC is provided in **Appendix F**. The laboratory issued confirmation of sample receipt intact.

12. QUALITY ASSURANCE AND QUALITY CONTROL

EDP implements quality assurance/quality control (QA/QC) procedures to improve transparency, consistency, comparability, completeness, and confidence in the data collected. The field and laboratory QA/QC procedures, results, and compliance with data quality indicators (DQIs) define the acceptable level of error required for this assessment.

The field and laboratory QA/QC procedures adopted and summary of results for the assessments at the site are provided in **Appendix E**.

13. RESULTS

13.1 Subsurface Profile

With the exception of TP19, the soil profile was generally consistent across the investigation area, described as brown clayey SAND to sandy CLAY with gravels and anthropogenic inclusions of crushed concrete, tile, blue metal gravels, terracotta piping and asphalt. No asbestos materials, hydrocarbon odour or staining was evident. The depth of fill varied across the site ranging from 0.5m up to 1.5m. The fill material was underlain by a dark brown/ black fine-grained clayey SAND and stiff grey CLAY. An organic odour was noted at TP11 and TP17.

The subsurface profile of TP19 adjacent the northern boundary of the investigation area was described as fill comprising a dark brown, gravelly sandy CLAY with numerous anthropogenic inclusions of scrap metal, bricks, terracotta, timber, blue metal gravels and minor amounts of ACM fragments. No hydrocarbon odour or staining was evident.

Borehole and test pit logs are presented in **Appendix C**.

13.2 Schedule of Laboratory Analysis

Envirolab Services Pty Ltd (Envirolab) (NATA #2901) and ALS Environmental (NATA #825) were engaged as the primary and secondary (or 'check') laboratories, respectively, for the chemical testing undertaken.

13.3 Soil Chemical analysis in accordance with NEPM 2013

A review of the analytical results for the chemical contaminants indicated that with the exception of heavy metals, select PAHs and TRH fractions the concentrations of CoPC were less than the laboratory practical quantitative limits (PQLs). All results were less than the adopted investigation and screening levels for each sample analysed.

The results are detailed in the attached NATA accredited laboratory report provided in **Appendix F** with the results and assessment criteria summarised in **Tables D1-D3** provided in **Appendix D.** The borehole locations are shown on **Figure 2**

13.4 Asbestos Bulk Sample Results

One suspected asbestos fragment sample was submitted for confirmatory laboratory analysis for the presence of asbestos. The results indicated the positive identification of asbestos with a combination of chrysotile (white asbestos) and amosite (brown asbestos) identified. The results are detailed in **Table D3** and the NATA certificate of analysis included in **Appendix F.**

Table 5 – Summary of Asbestos Bulk Sample Laboratory Results

Sample No.	Date sampled	Sample Location	Type	Asbestos Identified	Factual Description
AS001	2 October 2020	TP19-0.5m	ACM	Chrysotile and Amosite	Fibre cement material

13.5 Asbestos in Soil Sample Results

Laboratory results for the 36 soil samples collected and analysed indicated that asbestos fibres were not identified in the soil samples analysed.

13.6 Soil Chemical Analysis in accordance with the ENM Order

A review of analytical results, with reference to the NSW EPA ENM Order indicated the following:

- Benzo(a)pyrene (BAP) concentration of 1.5 mg/kg was detected in sample TP03_0.1 in exceedance of the absolute maximum concentration for characterisation (1 mg/kg) as detailed in Table 4 of the NSW ENM Order.
- Lead concentrations of 72 mg/kg and 55 mg/kg were detected in samples TP01_0.1 and TP03_0.1 respectively, in exceedance of the maximum average concentration for characterisation (50 mg/kg) however were below the absolute maximum concentration for characterisation (100 mg/kg) as detailed in Table 4 of the NSW ENM Order.
- Nickel concentrations of 43 mg/kg and 34 mg/kg were detected in samples TP02_0.1 and TP20_0.1 respectively, in exceedance of the maximum average concentration for characterisation (30 mg/kg) however were below the absolute maximum concentration for characterisation (60 mg/kg) as detailed in Table 4 of the NSW ENM Order.
- TRH C_{10}-C_{36} concentration of 290 mg/kg were detected in sample TP13_0.3 and in exceedance of the maximum average concentration for characterisation (250 mg/kg) however were below the absolute maximum concentration for characterisation (500 mg/kg) as detailed in Table 4 of the NSW ENM Order.
- All other contaminant concentrations analysed were less than the laboratory PQLs or less than the maximum average concentration as detailed in Table 4 of the NSW ENM Order.
- A review of the analytical results indicated that the overall average pH and EC demonstrated compliance with the requirements of the NSW ENM Order.

Exceedances are shown on **Figure 3** provided in **Appendix A**.

13.7 Foreign Materials in accordance with the ENM Order

A review of analytical results, with reference to the NSW EPA ENM Order indicated the following:

- Foreign materials detected in seven samples (TP08_0.2, TP09_0.1, TP11_0.1, TP13_0.3, TP14_0.3, TP15_0.1, TP15_1.0 and TP16_0.1) in exceedance of the absolute maximum concentration for characterisation (0.1 %) as detailed in Table 4 of the NSW ENM Order. Exceedances ranged from 0.1 % to 0.71 % with the highest concentration of foreign materials were identified within sample TP15_0.1.
- Foreign material concentrations of 0.07 % were detected in sample TP10_0.9 in exceedance of the maximum average concentration for characterisation (0.05 %) however were below the absolute maximum concentration for characterisation (0.1 %) as detailed in Table 4 of the NSW ENM Order.
- All other foreign material concentrations were less than the laboratory PQLs or less than the maximum average concentration as detailed in Table 4 of the NSW ENM Order.

Exceedances are shown on **Figure 3** provided in **Appendix A**.

13.8 Acid Sulfate Soils

Thirty-six selected soil samples were initially analysed for presence of acid sulfate soils by way of an acid sulfate soil field screen. A review of analytical results indicated the following:

- pH-F (prior to oxidation) ranged between pH4.8 and pH6.7; and
- pH-FOX (following oxidation) ranged between pH2.6 and pH6.7 (six samples recorded pH-FOX <3).

Twenty-two selected soil samples were further analysed using the chromium reducible sulfur analysis. Analysis identified soils with moderate potential acidity, though mild oxidisable sulfur, indicating although being acid sulfate soils, other acidity sourced (i.e. organic matter) are present that contribute greater acidity that pyrite sulfur. An in-depth result summary and discussion is to be included in an Acid Sulfate Soil Management Plan to be prepared for the site.

13.9 Waste Classification

Soil analytical results of the overlying fill material were compared against the NSW EPA Waste Classification Guidelines 2014, for the purpose of providing an in-situ waste classification for the material to facilitate offsite disposal, where required.

When compared against the waste classification guidelines, the results indicated that with the exception of lead, nickel and BaP, concentrations of CoPC were less than the Contaminant Threshold (CT) and/or Specific Contaminant Concentrations (SCC) for General Solid Waste (CT1/SCC1) without associated leachate criterion (TCLP1). Lead, nickel and BaP concentrations were further assessed using the SCC/TCLP test, with all results less than thee SCC and TCLP for General Solid Waste (<SCC1/TCLP1).

Based on the identification of ACM within TP19, the classification of the soils within this location will be Special Waste (asbestos waste) with chemical classification of General Solid Waste (non-putrescible).

14. DISCUSSION

14.1 Fill Layer

The intrusive investigation (test pits advanced with excavator) identified a fill layer of varying depth (0.5m to 1.5m) across the site, with varying quantities of foreign materials. The fill material at TP19 varied notably, comprising various building materials, scrap metal, blue metal gravels and non-friable asbestos-containing fibre cement fragments.

Soil samples were collected at twenty locations across the site for the purpose of chemical contaminant analysis. Each sample was submitted for laboratory analysis at a NATA accredited laboratory (Envirolab Services). All analytical results for Contaminants of Potential Concern were below the adopted contaminant thresholds. With the exception of TP19, fill material encountered during the investigation was comparable to both previous investigations undertaken by Douglas partners 2014 and Coffey 2019.

Based on the fieldwork undertaken, review of analytical results and within the constraints and limitations of the assessment, EDP considers that chemical contaminants within the fill material have not been identified that would indicate gross contamination within the soils assessed onsite. As such, the risk to human health associated with chemical contaminants within the soils planned to be disturbed during upcoming works at the site is considered to be low.

14.2 Asbestos Containing Material

ACM in the form of several fibre cement fragments were found to be present within the fill profile within TP19 adjacent the northern boundary of the site. No ACM was identified to the ground surface within the investigation area, within any other test pit locations or within soil samples submitted for laboratory analysis. EDP consider the asbestos present at the site to represent minor contamination which is localised within the vicinity of TP19 given the subsurface profile varied significantly to that of the rest of the site.

Given that the ACM was identified at depth (0.5 mbgl), EDP considers the risk to future site users to be low. However the identification of minor amounts ACM fragments within the soil media at TP19 presents a risk to potential receptors, including site workers throughout the construction works, neighbouring site users and future occupiers of the site. These risks must be managed throughout the proposed construction and earth works, to mitigate the risks posed to potential receptors.

In consideration that the proposed basement excavation will effectively remove the ACM, EDP considers the implementation of a site-specific Asbestos Management Plan (AMP) incorporated into a Construction Environmental Management Plan to be suitable for the management of the minor asbestos-impacted hotspot. The AMP should detail the removal and disposal of the asbestos-impacted hotspot, subsequent validation by a suitably qualified Environmental Consultant/Licensed Asbestos Assessor (LAA) and incorporate an unexpected finds protocol for the site. EDP consider the ACM find to be consistent with the findings of the previous investigations, is minor in nature and does not require a specific remediation protocol to be manage appropriately.

14.3 Excavated Natural Material (ENM) Assessment

A soil reuse assessment was undertaken to determine whether fill material to be excavated at the site was compliant with the NSW ENM Order. The assessment identified BAP concentrations in one sample (TP03_0.1) and foreign materials within seven samples (TP08_0.2, TP09_0.1, TP11_0.1, TP13_0.3, TP14_0.3, TP15_0.1, TP15_1.0 and TP16_0.1) in exceedance of the absolute maximum concentration for characterisation as detailed in Table 4 of the NSW ENM Order. Consequently, the material is currently not considered compliant with the NSW EPA *Excavated Natural Material Order 2014* and is not suitable for reuse in consideration of the conditions of the order and the exemption.

Field observations made during the in-situ investigation identified a varying amount of foreign materials within fill material at the site. Consequently, if sections of fill material with minor amounts of foreign material are identified during bulk excavation, this material should be stockpiled separately within the site. Additional assessment of the stockpiled material can be undertaken to determine whether the material is compliant with the NSW EPA *Excavated Natural Material Order 2014*.

14.4 Acid Sulfate Soils

Chromium reducible sulfur analysis was conducted to determine the presence of Actual Acid Sulfate Soils (AASS) or Potential Acid Sulfate Soils (PASS) within 22 samples at the site. Analysis identified soils with acid pH though only minor presence of oxidisable sulfur, indicating a minor potential acid sulfate soil condition. In-depth result summary and discussion is to be included in an Acid Sulfate Soil Management Plan to be prepared separately for the site.

15. UPDATED CONCEPTUAL SITE MODEL

The CSM for the site was updated following the additional data obtained through the sampling and analysis undertaken as part of this updated DSI. The updated CSM has been developed based on the actual sources of impact, chemical concern, transport mechanisms and receptors.

15.1 Sources of Impact

Based on the analysis of soil samples, this investigation has determined that the site has been impacted by historical activities undertaken at the site. Due to the nature of the site, the origin of the contaminants cannot be definitively determined, although evidence suggests that uncontrolled historic filling may be the likely source of contamination.

Minor potential ASS was identified within natural materials underlying the identified fill materials at the site. These will be managed in accordance with the Acid Sulfate Soils Management Plan to be prepared for the site.

15.2 Contaminants of Concern

Based on the site observations and soil analysis, non-friable ACM fragments (bonded asbestos) are the contaminant of concern identified at the time of assessment. Based on an understanding of the proposed development, site observations and quantification of these contaminants, it was determined that the minor isolated occurrence will be managed during the development stage with minimal risk.

15.3 Fate, Transport and Exposure

15.3.1 Asbestos Containing Material Fragments

The inhalation of asbestos fibres is known to cause lung cancer, mesothelioma, asbestosis, and cancer of the larynx & ovary. The primary exposure pathway of friable asbestos is the inhalation of asbestos contaminated soils or dust.

Bonded asbestos only poses a significant risk to site users when crushed, broken, or weathered, causing the release of asbestos fibres (friable asbestos).

15.4 Potential Onsite Receptors

- Construction workers during development of the site;
- Current and future users of the site; and
- Maintenance workers who may disturb soil at the site.

15.5 Potential Surrounding Receptors

Due to the nature of the identified contaminants of concern, there is minor risk to surrounding site users only if soils are disturbed and dust is generated, or if ACM is crushed or broken, and friable fibres are released. During proposed soil disturbance, site controls must be implemented to prevent potential impact to surrounding receptors.

16. CONCLUSION AND RECOMMENDATION

Based on a review of the information outlined in this report, observations made as part of the site inspection, and analytical results of the detailed sampling event, EDP concludes that the potential for significant gross or widespread contamination to exist at the site is considered to be low and that no further investigation at the site is necessary.

Furthermore, the relevant SEARs applicable for the project are itemised in **Table 6** below and how they have been addressed.

Table 6 – Applicable SEARs for the Project

Deliverable	Refer to source within SEARs	Consultant	Consultation Responsibilities	How this is addressed
Contamination Assessment	16. Contamination	EDP	Provide a Stage 2 Detailed Site Contamination report as per the Future Environmental Assessment Requirements SSD Concept Approval SSD-10114.	Previous investigation reports and data. This desktop and Intrusive investigation.
Acid Sulfate Soils Assessment and Management Plan	18. Soil and Water	EDP	The EIS shall include a: Geotechnical assessment. Acid Sulfate Soils Assessment and Management Plan The EIS must map the following features relevant to soil and water including: Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method). Wetlands as described in s4.2 of the Biodiversity Assessment Method.	Geotechnical assessment provided by Coffey 2019. Previous investigation reports and data. This desktop and Intrusive investigation for deliverable of ASS Assessment and ASS Management Plan.
Groundwater Assessment	18. Soil and Water	EDP	The EIS shall include a: Groundwater Assessment. The EIS must map the following features relevant to soil and water including: Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).	Previous investigation reports and data. This desktop and Intrusive investigation for deliverable of Groundwater Assessment Report and including the requirements as specified in the SEARs, in

Deliverable	Refer to source within SEARs	Consultant	Consultation Responsibilities	How this is addressed
			Wetlands as described in s4.2 of the Biodiversity Assessment Method. Groundwater. Groundwater dependent ecosystems. Proposed intake and discharge locations. The EIS must describe background conditions for any water resource likely to be affected by the development including: The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction; and Identification of proposed monitoring of water quality.	column 4 of this table and any recommendations for further assessment or monitoring.

Based on this investigation and in conjunction with previous investigations undertaken at the site, localised ACM contamination has been identified. This known contamination must be managed under a site-specific Asbestos Management Plan incorporated into a Construction Environmental Management Plan, to ensure the safety of potential receptors throughout the construction works. The level of contamination (extent and degree) is not considered significant enough to require the preparation of a RAP.

In-situ fill material at the site is currently not considered compliant with the NSW EPA *Excavated Natural Material Order 2014* and is currently not suitable for reuse due to exceedances of BaP and foreign materials. If during bulk earthworks sections of soil are determined to be visibly free of foreign materials, these soils should be stockpiled in a separate location on-site to allow for additional ENM assessment. This approach must ensure the unacceptable hotspots (those exceeding absolute maximum) are excluded from further assessment. Alternatively, in-situ soils at the site (excluding TP19) are classified as General Solid Waste (non-putrescible). Soils excavated from the asbestos hotspot identified at TP19 must be disposed offsite as Special Waste (asbestos waste) with chemical classification of General Solid Waste (non-putrescible).

Minor potential Acid Sulfate Soils (ASS) were identified within natural materials underlying the fill layer at the site. These will be managed in accordance with the Acid Sulfate Soils Management Plan to be prepared for the site.

EDP concludes that based on the investigation results, the site is suitable for the proposed site work, subject to the development and implementation of an Asbestos Management Plan (AMP), prepared by a suitably qualified and experienced environmental professional. This AMP must be implemented throughout all earthworks undertaken at the site.

Appendix A: Figures

edp

26-30 Mann Street, Gosford NSW

Updated Detailed Site Investigation

Site Location

LEGEND:

⊕	Site location
▭	Approximate site boundary

Image from: Nearmap, 2020

DETAILS:

Client Name:	SH Gosford Residential Pty Ltd
EDP Reference:	S-02118.001 V3 / S0001
Figure Number:	1
Figure Name:	Site Location
Assessment Date:	Friday, 2 October 2020

edp

26-30 Mann Street, Gosford NSW

Updated Detailed Site Investigation

Sampling Plan

LEGEND:	
	Approximate site boundary
⊗	Approximate test pit location
⊗	Approximate borehole location

Image from: Nearmap, 2020

DETAILS:	
Client Name:	SH Gosford Residential Pty Ltd
EDP Reference:	S-02118.001 V3 / S0001
Figure Number:	2
Figure Name:	Sampling Plan
Assessment Date:	Friday, 2 October 2020

edp

26-30 Mann Street, Gosford NSW

Updated Detailed Site Investigation

Criteria Exceedances

LEGEND:	
✖	ACM Detected
	NSW ENM Order 2014 (Absolute Maximum)
	NSW 2014 ENM Order 2014 (Maximum Average)

Image from: Nearmap, 2020

DETAILS:	
Client Name:	SH Gosford Residential Pty Ltd
EDP Reference:	S-02118.001 V3 / S0001
Figure Number:	2
Figure Name:	Sampling Plan
Assessment Date:	Friday, 2 October 2020

Appendix B: Photographs

PHOTOGRAPHIC LOG

Site Details:	26-30 Mann Street, Gosford NSW
EDP Reference:	S-02188.001

Photo 1: Overview of facing north

Photo 2: Overview of facing south west.

Photo 3: Overview of earthen mound within eastern boundary of site.

Photo 4: Overlying fill material observed at TP2.

Photo 5: Overlying fill material observed at TP3.

Photo 6: Overlying fill material observed at TP8.

PHOTOGRAPHIC LOG

Site Details:	26-30 Mann Street, Gosford NSW
EDP Reference:	S-02188.001

Photo 7: TP17.

Photo 8: Material excavated from TP19 within the northern boundary of the site.

Photo 9: Mixed building rubble and scrap metal encountered at TP19.

Photo 10: Asbestos-containing fibre cement sheeting sampled at TP19 (AS001).

Photo 9: Clay material encountered at BH01

Photo 10: Clay material encountered at BH03.

End of Photographic Log

Appendix C: Borehole Logs

ENVIRONMENTAL BOREHOLE / TESTPIT TP01

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP01_0.1	Y		FILL: Brown silty SAND, loose, dry with rootlets and blue metal gravels (1-10 mm). No asbestos materials, odour or staining evident.	QA01 and QA02 @BH01_0.1
0.5					FILL: Brown/ dark brown clayey SAND, loose, soft, slightly moist with sandstone. No asbestos materials, odour or staining evident.	
1		TP01_1.0	Y			
1.2					SAND:Dark brown/ black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3					Termination Depth at 1.3 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP02

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP02_0.1	Y		FILL: Brown silty SAND, loose, slightly moist with rootlets and blue metal gravels (1-10 mm). No asbestos materials, odour or staining evident.	
0.2					FILL: Red-orange CLAY, firm, slightly moist with crushed conrete. No asbestos materials, odour or staining evident.	
0.5		TP02_0.5	N			
0.9		TP02_0.9	Y			
1.1					SAND:Dark brown/ black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.2					Termination Depth at 1.1 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP03

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP03_0.1	Y		FILL: Brown silty SAND, loose, dry, with rootlets and blue metal gravels (1-10 mm), tiles, wire and crushed concrete. No asbestos materials, odour or staining evident.	
0.8					FILL: Brown clayey SAND, firm, loose slightly moist. No asbestos materials, odour or staining evident.	
1		TP03_1.0	Y			
1.1					SAND:Dark brown/ black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.2		TP03_1.2	Y			
1.3					Termination Depth at 1.2 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP04

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown silty SAND, loose, dry, with rootlets and blue metal gravels (1-10 mm), tiles, wire and crushed concrete. No asbestos materials, odour or staining evident.	
0.2					FILL: Brown/orange clayey SAND, firm, loose slightly moist with blue metal gravels (1-10 mm). No asbestos materials, odour or staining evident.	
0.3		TP04_0.3	Y			
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1					SAND: Grey fine grained silty SAND with orange mottling, dense, moist. No odour or staining evident.	
1.2		TP04_1.2	Y			QA03 and QA04 @ BH04_1.2
1.3					Termination Depth at 1.2 m at target depth in sand.	
1.4						

ENVIRONMENTAL BOREHOLE / TESTPIT TP05

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP05_0.1	Y		FILL: Brown/orange/red sandy CLAY, stiff, dry with gravels (1-10 mm). No asbestos materials, odour or staining evident.	
1		TP05_1.0	Y			
1.4		TP05_1.4	Y		SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT BH01

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Ute mounted drill rig
TOTAL DEPTH 5.0

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/orange/red sandy CLAY, stiff, dry with gravels (1-10 mm). No asbestos materials, odour or staining evident.	
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.4						
1.5						
1.6						
1.7					CLAY: Dark Grey CLAY, stiff, dry, low to medium plasticity. Grading to light grey with depth.	
1.8						
1.9						
2		BH01_2.0	Y			

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
2						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
		BH01_3.0	Y			
3						
3.1						
3.2						
3.3						
3.4						
3.5						
3.6						
3.7						
3.8						
3.9						
		BH01_4.0	Y			
4						
4.1						
4.2						
4.3						

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
4.4						
4.5						
4.6						
4.7					CLAY: Red CLAY with white mottling, stiff, dry, low to medium plasticity.	
4.8						
4.9						
5		BH01_5.0	Y		Termination Depth at 5 m at target depth in clay	
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						

ENVIRONMENTAL BOREHOLE / TESTPIT TP06

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.1

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP06_0.1	Y		FILL: Brown/ orange clayey SAND, loose, dry with blue metal gravels (1-10 mm). No asbestos materials, odour or staining evident.	
0.5					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1		TP06_1.0	Y			
1.1					Termination Depth at 1.1 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP07

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.3

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP07_0.1	Y		FILL: Brown sandy CLAY, loose, dry with blue metal gravels (1-10 mm), crushed brick, concrete and scrap metal. No asbestos materials, odour or staining evident.	
1		TP07_1.0	Y			
1.2		TP07_1.3	Y		SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3					Termination Depth at 1.3 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT BH05

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Ute mounted drill rig
TOTAL DEPTH 5.0

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown sandy CLAY, loose, dry with blue metal gravels (1-10 mm), crushed brick, concrete and scrap metal. No asbestos materials, odour or staining evident.	
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3						
1.4					CLAY: Dark Grey CLAY, stiff, dry, low to medium plasticity. Grading to light grey with depth.	
1.5						
1.6						
1.7						
1.8						
1.9						
2		BH05_2.0	Y			

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
2						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
		BH05_3.0	Y			
3						
3.1						
3.2						
3.3						
3.4						
3.5						
3.6						
3.7						
3.8						
3.9						
		BH05_4.0	Y			
4						
4.1						
4.2						
4.3						

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
4.4						
4.5						
4.6						
4.7					CLAY: Grey/red/yellow sandy CLAY, loose, firm, dry, low to medium plasticity.	
4.8						
4.9						
5		BH05_5.0	Y		Termination Depth at 5 m at target depth in sandy clay	
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						

ENVIRONMENTAL BOREHOLE / TESTPIT TP08

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.3

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP08_0.1	Y		FILL: Brown sandy CLAY with orange and grey mottling, loose, dry with blue metal gravels (1-10 mm), crushed concrete. No asbestos materials, odour or staining evident.	
1		TP08_1.0	Y			
1.2		TP08_1.2	Y		SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3					Termination Depth at 1.3 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP09

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.3

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
					FILL: Dark brown sandy CLAY, loose, soft, slightly moist with blue metal gravels (1-10 mm), crushed concrete, glass, plastic, tile fragments and sandstone. No asbestos materials, odour or staining evident.	On fill mound
		TP09_0.1	Y			
0.1						
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
		TP09_1.0	N			
1						
1.1						
1.2						
1.3						
1.4						
		TP09_1.5	Y			
1.5					Termination Depth at 1.5 m at target depth in fill.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP10

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP10_0.1	Y		FILL: Brown/ grey clayey SAND, loose, soft, slightly moist with blue metal gravels (1-10 mm) and timber sleeper. No asbestos materials, odour or staining evident.	
0.9		TP10_0.9	Y			
1		TP10_1.0	Y		SAND: Dark brown/black fine grained silty SAND, dense, moist. Mild organic odour.	
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP11

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP11_0.1	Y		FILL: Brown/ grey sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) and asphalt. No asbestos materials, odour or staining evident.	
0.2					FILL: Grey clayey SAND, loose, soft, slightly moist with sandstone. No asbestos materials, odour or staining evident.	
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP11_1.0	Y			QA05 and QA06 @ TP11_1.0
1.1					SAND: Grey fine grained silty SAND, dense, moist with mild organic odour.	
1.2		TP11_1.2	Y			
1.3						
1.4						
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP12

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/grey clayey SAND, loose, soft, slightly moist with blue metal gravels (1-10 mm) and timber stake. No asbestos materials, odour or staining evident.	
0.2		TP12_0.2	Y			
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP12_1.0	Y			
1.1						
1.2					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3		TP12_1.3	Y			
1.4						
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP13

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/ grey sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2						
0.3		TP13_0.3	Y			
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP13_1.0	Y			
1.1						
1.2					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3		TP13_1.3	Y			
1.4						
1.5					Termination Depth at 1.5 m at target depth in sand.	

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
2						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
		BH02_3.0	Y			
3					CLAY: Grey CLAY with red/orange mottling, stiff, dense, dry, low to medium plasticity.	
3.1						
3.2						
3.3						
3.4						
3.5						
3.6						
3.7						
3.8						
3.9						
		BH02_4.0	Y			
4						
4.1						
4.2						
4.3						

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
4.4						
4.5						
4.6						
4.7						
4.8						
4.9						
		BH02_5.0	Y			
5					Termination Depth at 5 m at target depth in sandy clay	
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						

ENVIRONMENTAL BOREHOLE / TESTPIT TP14

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2					FiLL: Brown clayey SAND, dense, slightly moist with blue metal gravels (1-10 mm), terracotta piping and brick. No asbestos materials, odour or staining evident.	
0.3		TP14_0.3	Y			
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP14_1.0	Y			
1.1						
1.2					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3		TP14_1.3	Y			
1.4						
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP15

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP15_0.1	Y		FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2					FILL: Brown sandy CLAY, dense, slightly moist with blue metal gravels (1-10 mm), terracotta piping, brick and glass. No asbestos materials, odour or staining evident.	
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP15_1.0	Y			
1.1						
1.2						
1.3					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.4		TP15_1.4	Y			
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT BH03

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Ute mounted drill rig
TOTAL DEPTH 5.0

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/ grey sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2					FILL: Brown sandy CLAY, dense, slightly moist with blue metal gravels (1-10 mm), terracotta piping, bricks and glass. No asbestos materials, odour or staining evident.	
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.4						
1.5						
1.6					CLAY: Dark grey CLAY, stiff, dry, low to medium plasticity. Grading to light grey with depth.	
1.7						
1.8						
1.9						
2		BH03_2.0	Y			QA09 and QA10 @ BH03_2.0

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
2						
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
		BH03_3.0	Y			
3						
3.1						
3.2						
3.3						
3.4						
3.5						
3.6						
3.7						
3.8						
3.9						
		BH03_4.0	Y			
4						
4.1						
4.2						
4.3						

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
4.4						
4.5					CLAY: Grey CLAY with red mottling, very stiff, dry, low to medium plasticity.	
4.6						
4.7						
4.8						
4.9						
5		BH03_5.0	Y		Termination Depth at 5 m at target depth in clay	
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						

ENVIRONMENTAL BOREHOLE / TESTPIT TP16

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP16_0.1	Y		FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with bricks, glass, terracotta and asphalt. No asbestos materials, odour or staining evident.	
0.2					FILL: Brown/orange sandy CLAY, firm, slightly moist with with bricks, glass, terracotta and asphalt. No asbestos materials, odour or staining evident.	
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1		TP16_1.0	Y			
1.1					SAND: Dark grey fine grained silty SAND, dense, moist. mild organic odour.	
1.2		TP16_1.2	Y			
1.3					SAND: Dark brown/ black fine grained silty SAND, dense, moist. mild organic odour.	
1.4						
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT BH04

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Ute mounted drill rig
TOTAL DEPTH 5.0

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with bricks, glass, terracotta and asphalt. No asbestos materials, odour or staining evident.	
0.2					FILL: Brown/orange sandy CLAY, firm, slightly moist with with bricks, glass, terracotta and asphalt. No asbestos materials, odour or staining evident.	
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1					SAND: Dark grey fine grained silty SAND, dense, moist. mild organic odour.	
1.2						
1.3					SAND: Dark brown/ black fine grained silty SAND, dense, moist. mild organic odour.	
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						
2		BH04_2.0	Y			

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
2					CLAY: Grey CLAY, stiff, dry, low to medium plasticity.	
2.1						
2.2						
2.3						
2.4						
2.5						
2.6						
2.7						
2.8						
2.9						
		BH04_3.0	Y			
3						
3.1						
3.2						
3.3						
3.4						
3.5						
3.6						
3.7						
3.8						
3.9						
		BH04_4.0	Y			
4						
4.1						
4.2						
4.3						

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
4.4						
4.5						
4.6						
4.7						
4.8						
4.9						
		BH04_5.0	Y			
5					Termination Depth at 5 m at target depth in clay.	
5.1						
5.2						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						

ENVIRONMENTAL BOREHOLE / TESTPIT TP17

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP17_0.1	Y		FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with bricks, glass, plastic. No asbestos materials, odour or staining evident.	
0.3					FILL: Brown sandy CLAY with orange and grey mottling, firm, slightly moist with with blue metal gravels and timber stake. No asbestos materials, odour or staining evident.	
0.5		TP17_0.5	Y			
1					SAND: Dark brown/ black fine grained silty SAND, dense, moist. Mild organic odour.	
1.1		TP17_1.1	Y			QA07 and QA08 @ TP17_1.1
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP18

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP18_0.1	Y		FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.5		TP18_0.5	Y			
0.9						
1		TP18_1.0	Y		SAND: Dark brown/black fine grained silty SAND, dense, moist. Mild organic odour.	
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP19

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1		TP19_0.1	Y		FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2						
0.3		TP19_0.3	Y		FILL: Dark brown/grey asphalt gravel layer (10-30 mm)	
0.4						
0.5		TP19_0.5	Y		FILL: Dark brown gravelly sandy CLAY, loose, soft, moist with blue metal gravels (1-10 mm 30%) scrap metal, steel rod, bricks, asphalt and fibre cement sheeting. No odour or staining evident.	ASB001 @ TP19_0.5
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5		TP19_1.5	Y			
					Termination Depth at 1.5 m at target depth in fill.	

ENVIRONMENTAL BOREHOLE / TESTPIT TP20

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Excavator
TOTAL DEPTH 1.5

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0					FILL: Brown/ grey gravelly sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm). No asbestos materials, odour or staining evident.	
		TP20_0.1	Y			
0.1						
0.2						
0.3						
0.4					FILL: Brown sandy CLAY with orange mottling, firm, slightly moist with asphalt, brick and terracotta. No asbestos materials, odour or staining evident.	
0.5						
0.6						
0.7						
0.8						
0.9						
		TP20_1.0	Y			
1						
1.1						
1.2						
1.3						
1.4						
		TP20_1.5	Y		SAND: Dark brown/ black fine grained silty SAND, dense, moist. Mild organic odour.	
1.5					Termination Depth at 1.5 m at target depth in sand.	

ENVIRONMENTAL BOREHOLE / TESTPIT BH02

PROJECT NUMBER S-02188.001
PROJECT NAME Updated DSI - 32 Mann Street
CLIENT St Hilliers
SITE ADDRESS 32 Mann Street, Gosford NSW

DATE 1/10/2020 - 2/10/2020
DRILLING METHOD Ute mounted drill rig
TOTAL DEPTH 5.0

LOGGED BY LRB
CHECKED BY RJJ

COMMENTS

Depth (m)	PID	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
0.1					FILL: Brown/ grey sandy CLAY, loose, soft, dry with blue metal gravels (1-10 mm) crushed concrete, terracotta and brick. No asbestos materials, odour or staining evident.	
0.2						
0.3						
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2					SAND: Dark brown/black fine grained silty SAND, dense, moist. No odour or staining evident.	
1.3						
1.4						
1.5					SAND: Grey fine grained clayey SAND, firm, dense, moist.	
1.6						
1.7						
1.8						
1.9						
2		BH02_2.0	Y			QA09 and QAC10 @ BH02_2.0

Appendix D: Summary Table of Results

TABLE D1: SUMMARY OF SOIL ANALYTICAL RESULTS

Analyte			Asbestos (%w/w)	BTEX (mg/kg)						Metals (mg/kg)								OCP (mg/kg)																							
			AS4964-2004 AF	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	a-BHC	b-BHC	g-BHC (Lindane)	Heptachlor	d-BHC	Aldrin	Heptachlor epoxide	Endosulfan (I & II)	4,4-DDE	Dieldrin	Endrin	DDD	Endrin aldehyde	DDT	Endosulfan sulphate	Methoxychlor	DDT+DDE+DDD	Aldrin + Dieldrin	Chlordane	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
Practical Quantitation Limit (PQL)			0.01	0.2	0.5	1	2	1	3	4	0.4	1	1	1	0.1	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Asbestos HSLs for Medium-High Density Residential			0.001																																						
NEPM 2013 Table 1A(1) Soil HILs for Residential B										500	150	500	30000	1200	120	1200	60000				10							20					500	600	10	90					
NEPM 2013 Table 1A(3) Soil HSLs A & B Residential for Vapour Intrusion (sand 0-<1m)				0.5	160	55			40																												3				
NEPM 2013 Table 1 B(7) Management Limits for Res, Parkland, Public Open Space (coarse soil)																																									
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact HSL-B Residential (high-density)				140	21000	5900			17000																												2200				
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact Intrusive Maintenance Worker				1100	120,000	85,000			130,000																												29,000				
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion HSL-B High Density Residential (sand 0-<1m)				0.5	160	57			40																												3				
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion for Intrusive Maintenance Worker (Shallow Trench) (sand 0-<2m)				77																																					
Sample ID:	Sampled Date:	Depth (m):																																							
S-02188.001-TP01_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	13	ND	9	19	72	ND	12	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	0.2
S-02188.001-TP01_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	13	39	ND	2	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	0.2
S-02188.001-TP02_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	30	26	9	ND	43	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP02_0.9	1/10/2020	0.9	ND	ND	ND	ND	ND	ND	ND	14	ND	7	9	13	ND	10	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP03_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	5	ND	13	22	55	0.1	10	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	0.2	ND	ND	1
S-02188.001-TP03_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	5	41	0.2	1	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP03_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	2	11	ND	3	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP04_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	5	ND	5	9	17	ND	5	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP04_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP05_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	5	ND	10	4	11	ND	5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP05_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	6	29	ND	4	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP05_1.4	1/10/2020	1.4	ND	ND	ND	ND	ND	ND	ND	11	ND	7	2	7	ND	3	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH01_2.0	1/10/2020	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	2	5	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP06_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	8	ND	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP06_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	5	ND	11	5	13	ND	5	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP07_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	8	15	ND	8	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP07_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	6	ND	11	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP07_1.3	1/10/2020	1.3	ND	ND	ND	ND	ND	ND	ND	6	ND	12	15	76	0.2	5	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
S-02188.001-BH05_3.0	2/10/2020	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	2	3	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP08_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	6	ND	ND	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP08_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	4	ND	12	8	22	ND	5	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	0.6
S-02188.001-TP08_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	2	8	ND	4	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
S-02188.001-TP09_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	4	ND	10	8	15	ND	8	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP09_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	5	ND	10	6	22	ND	5	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP10_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	2	9	ND	2	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP10_0.9	1/10/2020	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	5	ND	ND	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP10_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	14	ND	7	5	13	ND	4	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP11_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	4	ND	13	22	14	ND	17	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP11_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	5	ND	ND	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP11_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	5	16	ND	7	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP12_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	3	6	ND	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP12_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	1	9	ND	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP12_1.3	1/10/2020	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	2	5	ND	2	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP13_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	11	23	ND	12	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP13_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1	7	ND	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP13_1.3	1/10/2020	1.3	ND	ND	ND	ND	ND	ND	ND	35	ND	12	66	240	0.3	11	130	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH02_4.0	2/10/2020	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	6	4	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP14_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	5	22	ND	4	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP14_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	1	6	ND	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP14_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	5	ND	7	5	15	ND	4	35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE D1: SUMMARY OF SOIL ANALYTICAL RESULTS

Analyte	Asbestos (%w/w)	BTEX (mg/kg)						Metals (mg/kg)							
	AS4964-2004 AF	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
Practical Quantitation Limit (PQL)	0.01	0.2	0.5	1	2	1	3	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Asbestos HSLs for Medium-High Density Residential	0.001														
NEPM 2013 Table 1A(1) Soil HILs for Residential B								500	150	500	30000	1200	120	1200	60000
NEPM 2013 Table 1A(3) Soil HSLs A & B Residential for Vapour Intrusion (sand 0-<1m)		0.5	160	55			40								
NEPM 2013 Table 1 B(7) Management Limits for Res, Parkland, Public Open Space (coarse soil)															
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact HSL-B Residential (high-density)		140	21000	5900			17000								
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact Intrusive Maintenance Worker		1100	120,000	85,000			130,000								
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion HSL-B High Density Residential (sand 0-<1m)		0.5	160	57			40								
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion for Intrusive Maintenance Worker (Shallow Trench) (sand 0-<2m)		77													

Analyte	OCP (mg/kg)																							
	a-BHC	b-BHC	g-BHC (Lindane)	Heptachlor	d-BHC	Aldrin	Heptachlor epoxide	Endosulfan (I & II)	4,4-DDE	Dieldrin	Endrin	DDD	Endrin aldehyde	DDT	Endosulfan sulphate	Methoxychlor	DDT+DDE+DDD	Aldrin + Dieldrin	Chlordane	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
Practical Quantitation Limit (PQL)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Asbestos HSLs for Medium-High Density Residential																								
NEPM 2013 Table 1A(1) Soil HILs for Residential B				10							20					500	600	10	90					
NEPM 2013 Table 1A(3) Soil HSLs A & B Residential for Vapour Intrusion (sand 0-<1m)																				3				
NEPM 2013 Table 1 B(7) Management Limits for Res, Parkland, Public Open Space (coarse soil)																								
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact HSL-B Residential (high-density)																				2200				
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact Intrusive Maintenance Worker																				29,000				
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion HSL-B High Density Residential (sand 0-<1m)																				3				
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion for Intrusive Maintenance Worker (Shallow Trench) (sand 0-<2m)																								

Sample ID:	Sampled Date:	Depth (m):	AS4964-2004 AF	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total Xylene	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
S-02188.001-TP15_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	15	25	ND	10	69
S-02188.001-TP15_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	12	24	ND	8	59
S-02188.001-TP15_1.4	1/10/2020	1.4	ND	ND	ND	ND	ND	ND	ND	6	ND	9	7	16	ND	6	110
S-02188.001-BH03_4.0	2/10/2020	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	14	8	ND	ND	7
S-02188.001-TP16_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	5	ND	15	10	11	ND	13	60
S-02188.001-TP16_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	6	ND	11	8	14	ND	3	23
S-02188.001-TP16_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	6	5	ND	ND	2
S-02188.001-BH04_5.0	2/10/2020	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	10	7	ND	ND	2
S-02188.001-TP17_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	9	6	ND	5	13
S-02188.001-TP17_0.5	1/10/2020	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	ND	7	ND	1	2
S-02188.001-TP17_1.1	1/10/2020	1.1	ND	ND	ND	ND	ND	ND	ND	4	ND	7	1	7	ND	3	7
S-02188.001-TP18_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	9	15	ND	8	23
S-02188.001-TP18_0.5	1/10/2020	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	13	17	ND	9	26
S-02188.001-TP18_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	5	ND	11	3	12	ND	3	9
S-02188.001-TP19_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	23	26	5	ND	41	35
S-02188.001-TP19_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	18	25	5	ND	38	34
S-02188.001-TP19_0.5	1/10/2020	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	27	48	ND	27	94
S-02188.001-TP19_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	4	ND	10	3	39	ND	ND	37
S-02188.001-TP20_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	25	6	ND	34	34
S-02188.001-TP20_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	2	33	ND	1	46
S-02188.001-TP20_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	2
Statistics		Minimum	-	0	0	0	0	0	0	4	0	3	1	1	0.1	1	1
		Maximum	-	0	0	0	0	0	0	35	0	30	66	240	0.3	43	130
		Mean	-	0	0	0	0	0	0	2.7049	0	9.2787	8.918033	19.934	0.0131	7.1148	29.0164
		Standard Deviation	-	0	0	0	0	0	0	5.5508	0	5.1418	10.58032	32.656	0.0532	9.8609	29.3073
		CoV	-	0	0	0	0	0	0	2.0521	0	0.5541	1.186396	1.6382	4.0528	1.386	1.01002
		95% UCL															

Sample ID:	a-BHC	b-BHC	g-BHC (Lindane)	Heptachlor	d-BHC	Aldrin	Heptachlor epoxide	Endosulfan (I & II)	4,4-DDE	Dieldrin	Endrin	DDD	Endrin aldehyde	DDT	Endosulfan sulphate	Methoxychlor	DDT+DDE+DDD	Aldrin + Dieldrin	Chlordane	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
S-02188.001-TP15_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP15_1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP15_1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH03_4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
S-02188.001-TP16_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP16_1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP16_1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH04_5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP17_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP17_0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP17_1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP18_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP18_0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP18_1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP19_0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP19_0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP19_0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	0.6	4.3
S-02188.001-TP19_1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP20_0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP20_1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND
S-02188.001-TP20_1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.6	0.1
Maximum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0.6	4.3
Mean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0115	0	0.0098	0.1115
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0686	0	0.0768	0.5666
CoV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.9739	0	7.8102	5.0827
95% UCL																								

Legend:
ND = Non Detect
Coloured Concentration = Criteria Exceeded

TABLE D1: SUMMARY OF SOIL ANALYTICAL RESULTS

Analyte	PAHs (mg/kg)														PCB (mg/kg)								TRH (mg/kg)									
	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j+k)fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Total Positive PAHs	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (PQL)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Total PCBs	C6 - C9	C6-C10	C6-C10 less BTEX (F1)	C10 - C14	C15 - C28	C29-C36	C10-C16	F2-NAPHTHALENE	C16-C34 (F3)	C34-C40 (F4)
Practical Quantitation Limit (PQL)	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	25	25	25	50	100	100	50	50	100	100
NEPM 2013 Asbestos HSLs for Medium-High Density Residential																																
NEPM 2013 Table 1A(1) Soil HILs for Residential B							4				400			4								1										
NEPM 2013 Table 1A(3) Soil HSLs A & B Residential for Vapour Intrusion (sand 0-<1m)																									45					110		
NEPM 2013 Table 1 B(7) Management Limits for Res, Parkland, Public Open Space (coarse soil)																									700					1000	2500	10000
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact HSL-B Residential (high-density)																								5600					4200		5800	8100
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact Intrusive Maintenance Worker																								82,000					62,000		85,000	120,000
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion HSL-B High Density Residential (sand 0-<1m)																								44					110			
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion for Intrusive Maintenance Worker (Shallow Trench) (sand 0-<2m)																																
S-02188.001-TP01_0.1	1/10/2020	0.1	ND	0.4	0.4	0.2	0.1	0.2	0.2	0.1	ND	0.2	1.9	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP01_1.0	1/10/2020	1	ND	0.6	0.6	0.2	0.2	0.4	0.2	0.2	ND	0.2	2.7	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP02_0.1	1/10/2020	0.1	ND	ND	0.1	ND	ND	ND	0.06	ND	ND	ND	0.2	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP02_0.9	1/10/2020	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP03_0.1	1/10/2020	0.1	0.3	3.2	3	1.2	1	2.4	1.5	1	0.2	1.3	16	2.1	2.1	2.1	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP03_1.0	1/10/2020	1	ND	0.2	0.2	0.1	ND	ND	0.09	ND	ND	ND	0.66	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP03_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP04_0.3	1/10/2020	0.3	ND	0.2	0.2	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP04_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP05_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP05_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP05_1.4	1/10/2020	1.4	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH01_2.0	1/10/2020	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP06_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP06_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP07_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP07_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP07_1.3	1/10/2020	1.3	ND	0.5	0.4	0.1	0.2	0.3	0.1	0.1	ND	0.1	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH05_3.0	2/10/2020	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP08_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP08_1.0	1/10/2020	1	0.2	1.6	1.5	0.6	0.6	1	0.71	0.4	ND	0.5	7.9	0.9	1	1	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP08_1.2	1/10/2020	1.2	ND	0.4	0.4	0.1	0.1	0.3	0.1	ND	ND	0.1	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP09_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP09_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP10_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP10_0.9	1/10/2020	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP10_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP11_0.1	1/10/2020	0.1	ND	0.2	0.2	ND	0.1	ND	0.1	ND	ND	0.1	0.83	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
S-02188.001-TP11_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP11_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP12_0.2	1/10/2020	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP12_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP12_1.3	1/10/2020	1.3	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	0.4	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP13_0.3	1/10/2020	0.3	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	140	ND	ND	150	180
S-02188.001-TP13_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP13_1.3	1/10/2020	1.3	ND	0.2	0.2	ND	ND	ND	0.05	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH02_4.0	2/10/2020	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP14_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP14_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP14_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE D1: SUMMARY OF SOIL ANALYTICAL RESULTS

Analyte	PAHs (mg/kg)														PCB (mg/kg)								TRH (mg/kg)								
	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j+k)fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Total Positive PAHs	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (PQL)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Total PCBs	C6 - C9	C6-C10	C6-C10 less BTEX (F1)	C10 - C14	C15 - C28	C29-C36	C10-C16	F2-NAPHTHALENE	C16-C34 (F3)	C34-C40 (F4)
Practical Quantitation Limit (PQL)	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1	0.05	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	25	25	25	50	100	100	50	50	100	100
NEPM 2013 Asbestos HSLs for Medium-High Density Residential																																
NEPM 2013 Table 1A(1) Soil HILs for Residential B							4				400			4								1										
NEPM 2013 Table 1A(3) Soil HSLs A & B Residential for Vapour Intrusion (sand 0-<1m)																									45					110		
NEPM 2013 Table 1 B(7) Management Limits for Res, Parkland, Public Open Space (coarse soil)																									700					1000	2500	10000
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact HSL-B Residential (high-density)																								5600					4200		5800	8100
CRC CARE 2011 Table A4 Soil HSLs for Direct Contact Intrusive Maintenance Worker																								82,000					62,000		85,000	120,000
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion HSL-B High Density Residential (sand 0-<1m)																								44					110			
CRC CARE 2011 Table A3 Soil HSLs for Vapour Intrusion for Intrusive Maintenance Worker (Shallow Trench) (sand 0-<2m)																																
S-02188.001-TP15_0.1	ND	0.1	0.1	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP15_1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP15_1.4	ND	0.2	0.2	ND	ND	ND	0.05	ND	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH03_4.0	2/10/2020	4	ND	0.3	0.4	0.2	0.2	0.3	0.2	ND	ND	0.1	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP16_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP16_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP16_1.2	1/10/2020	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-BH04_5.0	2/10/2020	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP17_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP17_0.5	1/10/2020	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP17_1.1	1/10/2020	1.1	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP18_0.1	1/10/2020	0.1	ND	0.3	0.3	0.2	0.1	0.2	0.1	ND	ND	0.1	1.4	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP18_0.5	1/10/2020	0.5	ND	0.2	0.2	ND	ND	ND	0.08	ND	ND	ND	0.4	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP18_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP19_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP19_0.3	1/10/2020	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	310	ND	ND	260	230
S-02188.001-TP19_0.5	1/10/2020	0.5	0.9	6.1	4.5	2.1	1.6	2.6	1.8	0.7	0.2	0.8	27	2.5	2.5	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	260	420	ND	ND	550	270
S-02188.001-TP19_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP20_0.1	1/10/2020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP20_1.0	1/10/2020	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
S-02188.001-TP20_1.5	1/10/2020	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Statistics		Minimum	0.2	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.2	0.1	0.07	0.9	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	260	140	0	0	150	100
		Maximum	0.9	6.1	4.5	2.1	1.6	2.6	1.8	1	0.2	1.3	27	2.5	2.5	2.5	0	0	0	0	0	0	0	0	0	0	0	0	260	420	0	0	550	270
		Mean	0.023	0.241	0.2131	0.082	0.0689	0.1262	0.1018	0.041	0.0066	0.0574	1.101	0.0902	0.0918	0.1	0	0	0	0	0	0	0	0	0	0	0	0	4.2623	14.262	0	0	15.737705	12.786885
		Standard Deviation	0.123	0.8928	0.7082	0.316	0.2514	0.4665	0.3112	0.1637	0.0359	0.2045	4.0806	0.4277	0.431	0.434	0	0	0	0	0	0	0	0	0	0	0	0	33.29	68.275	0	0	79.319166	51.352739
		CoV	5.3597	3.7049	3.3229	3.8548	3.6507	3.6957	3.0567	3.9939	5.4765	3.5641	3.7063	4.7432	4.6949	4.3397	0	0	0	0	0	0	0	0	0	0	0	0	7.8102	4.7871	0	0	5.040072	4.0160476
		95% UCL																																

Legend:
ND = Non Detect
Coloured Concentration = Criteria Exceeded

TABLE D2: SUMMARY OF ANALYTICAL RESULTS FOR ENM CLASSIFICATION

Analyte			Heavy Metals							PAHs		BTEX				TRH	Foreign Material	Inorganics		Asbestos
			Total (mg/kg)							Total (mg/kg)		Total (mg/kg)				Total (mg/kg)	%	pH	dS/m	
			Arsenic	Cadmium	Chromium (iv)	Lead	Mercury	Nickel	Zinc	Benzo(a)Pyrene	Total PAH	Benzene	Toluene	Ethylbenzene	Xylene	C10-C36	Foreign Material	pH	Electrical Conductivity	Asbestos in Soil (g/kg)
Practical Quantitative Limit (PQL)			4	0.4	1	1	0.1	1	1	0.05	2	0.2	0.5	1	3	250	-	-	-	0.1
NSW ENM Order 2014 (Absolute Maximum)			40	1	150	100	1	60	300	1	40	0.5	65	25	15	500	0.1	4.5 - 10	3	ND
NSW 2014 ENM Order 2014 (Maximum Average)			20	0.5	75	50	0.5	30	150	0.5	20					250	0.05	5 - 9	1.5	ND
Sample ID	**Date Sampled**	**Depth (m)**																		
S-02188.001-TP01_0.1	1/10/2020	0.1	13	ND	9	72	ND	12	99	0.2	1.9	ND	ND	ND	ND	ND	0.05	7.9	0.00057	ND
S-02188.001-TP01_1.0	1/10/2020	1	ND	ND	7	39	ND	2	54	0.2	2.7	ND	ND	ND	ND	ND	0.05	8.3	0.0011	ND
S-02188.001-TP02_0.1	1/10/2020	0.1	ND	ND	30	9	ND	43	40	0.06	0.2	ND	ND	ND	ND	ND	0.05	9.1	0.0013	ND
S-02188.001-TP02_0.9	1/10/2020	0.9	14	ND	7	13	ND	10	26	ND	ND	ND	ND	ND	ND	ND	0.05	8.3	0.0014	ND
S-02188.001-TP03_0.1	1/10/2020	0.1	5	ND	13	55	0.1	10	73	1.5	16	ND	ND	ND	ND	ND	0.05	8.4	0.0012	ND
S-02188.001-TP03_1.0	1/10/2020	1	ND	ND	6	41	0.2	1	11	0.09	0.66	ND	ND	ND	ND	ND	0.05	6.6	0.00049	ND
S-02188.001-TP04_0.3	1/10/2020	0.3	5	ND	5	17	ND	5	41	ND	0.3	ND	ND	ND	ND	ND	0.05	9	0.00097	ND
S-02188.001-TP05_0.1	1/10/2020	0.1	5	ND	10	11	ND	5	28	ND	ND	ND	ND	ND	ND	ND	0.05	5.7	0.0004	ND
S-02188.001-TP05_1.0	1/10/2020	1	ND	ND	11	29	ND	4	33	ND	ND	ND	ND	ND	ND	ND	0.05	6.1	0.00037	ND
S-02188.001-TP06_0.1	1/10/2020	0.1	ND	ND	7	8	ND	1	2	ND	ND	ND	ND	ND	ND	ND	0.05	7.3	0.00018	ND
S-02188.001-TP07_0.1	1/10/2020	0.1	ND	ND	21	15	ND	8	20	ND	0.1	ND	ND	ND	ND	ND	0.05	7.8	0.0002	ND
S-02188.001-TP07_1.0	1/10/2020	1	ND	ND	10	6	ND	11	15	ND	ND	ND	ND	ND	ND	ND	0.05	7.8	0.00015	ND
S-02188.001-TP08_0.2	1/10/2020	0.2	ND	ND	7	6	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	0.2	6.8	0.000029	ND
S-02188.001-TP08_1.0	1/10/2020	1	4	ND	12	22	ND	5	26	0.71	7.9	ND	ND	ND	ND	ND	0.05	6.4	0.000032	ND
S-02188.001-TP09_0.1	1/10/2020	0.1	4	ND	10	15	ND	8	26	ND	ND	ND	ND	ND	ND	ND	0.17	8.4	0.00017	ND
S-02188.001-TP09_1.5	1/10/2020	1.5	5	ND	10	22	ND	5	27	ND	ND	ND	ND	ND	ND	ND	0.05	7.9	0.00027	ND
S-02188.001-TP10_0.2	1/10/2020	0.2	ND	ND	5	9	ND	2	12	ND	ND	ND	ND	ND	ND	ND	0.05	7.9	0.000097	ND
S-02188.001-TP10_0.9	1/10/2020	0.9	ND	ND	5	5	ND	ND	26	ND	ND	ND	ND	ND	ND	ND	0.07	6.1	0.000029	ND
S-02188.001-TP11_0.1	1/10/2020	0.1	4	ND	13	14	ND	17	55	0.1	0.83	ND	ND	ND	ND	ND	0.21	9.3	0.00012	ND
S-02188.001-TP11_1.0	1/10/2020	1	ND	ND	5	5	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	0.05	7	0.000066	ND
S-02188.001-TP12_0.2	1/10/2020	0.2	ND	ND	5	6	ND	5	6	ND	ND	ND	ND	ND	ND	ND	0.05	7.5	0.000096	ND

Analyte			Heavy Metals							PAHs		BTEX				TRH	Foreign Material	Inorganics		Asbestos
			Total (mg/kg)							Total (mg/kg)		Total (mg/kg)				Total (mg/kg)	%	pH	dS/m	
			Arsenic	Cadmium	Chromium (iv)	Lead	Mercury	Nickel	Zinc	Benzo(a)Pyrene	Total PAH	Benzene	Toluene	Ethylbenzene	Xylene	C10-C36	Foreign Material	pH	Electrical Conductivity	Asbestos in Soil (g/kg)
Practical Quantitative Limit (PQL)			4	0.4	1	1	0.1	1	1	0.05	2	0.2	0.5	1	3	250	-	-	-	0.1
NSW ENM Order 2014 (Absolute Maximum)			40	1	150	100	1	60	300	1	40	0.5	65	25	15	500	0.1	4.5 - 10	3	ND
NSW 2014 ENM Order 2014 (Maximum Average)			20	0.5	75	50	0.5	30	150	0.5	20					250	0.05	5 - 9	1.5	ND
Sample ID	**Date Sampled**	**Depth (m)**																		
S-02188.001-TP12_1.0	1/10/2020	1	ND	ND	9	9	ND	2	3	ND	ND	ND	ND	ND	ND	ND	0.05	7.6	0.000099	ND
S-02188.001-TP13_0.3	1/10/2020	0.3	ND	ND	9	23	ND	12	59	ND	0.1	ND	ND	ND	ND	290	0.1	8.8	0.00013	ND
S-02188.001-TP13_1.0	1/10/2020	1	ND	ND	5	7	ND	2	4	ND	ND	ND	ND	ND	ND	ND	0.05	6.2	0.000087	ND
S-02188.001-TP14_0.3	1/10/2020	0.3	ND	ND	12	22	ND	4	68	ND	ND	ND	ND	ND	ND	ND	0.14	9.9	0.00015	ND
S-02188.001-TP14_1.0	1/10/2020	1	ND	ND	4	6	ND	2	8	ND	ND	ND	ND	ND	ND	ND	0.05	7	0.0001	ND
S-02188.001-TP15_0.1	1/10/2020	0.1	ND	ND	9	25	ND	10	69	ND	0.3	ND	ND	ND	ND	ND	0.71	9.7	0.00014	ND
S-02188.001-TP15_1.0	1/10/2020	1	ND	ND	8	24	ND	8	59	ND	ND	ND	ND	ND	ND	ND	0.55	8.5	0.00014	ND
S-02188.001-TP16_0.1	1/10/2020	0.1	5	ND	15	11	ND	13	60	ND	ND	ND	ND	ND	ND	ND	0.24	9.5	0.0005	ND
S-02188.001-TP16_1.0	1/10/2020	1	6	ND	11	14	ND	3	23	ND	ND	ND	ND	ND	ND	ND	0.05	5	0.000041	ND
S-02188.001-TP17_0.1	1/10/2020	0.1	ND	ND	7	6	ND	5	13	ND	ND	ND	ND	ND	ND	ND	0.05	8	0.00025	ND
S-02188.001-TP17_0.5	1/10/2020	0.5	ND	ND	8	7	ND	1	2	ND	ND	ND	ND	ND	ND	ND	0.05	5.7	0.000028	ND
S-02188.001-TP18_0.1	1/10/2020	0.1	ND	ND	9	15	ND	8	23	0.1	1.4	ND	ND	ND	ND	ND	0.05	7.7	0.00032	ND
S-02188.001-TP18_0.5	1/10/2020	0.5	ND	ND	9	17	ND	9	26	0.08	0.4	ND	ND	ND	ND	ND	0.05	7.8	0.00032	ND
S-02188.001-TP20_0.1	1/10/2020	0.1	ND	ND	17	6	ND	34	34	ND	ND	ND	ND	ND	ND	ND	0.05	9	0.0002	ND
S-02188.001-TP20_1.0	1/10/2020	1	ND	ND	16	33	ND	1	46	ND	ND	ND	ND	ND	ND	ND	0.05	6	0.000096	ND
Average			6	-	11	18	-	9	32	0	3	-	-	-	-	290	0.10	7.485	0.009	-

Legend	
ND	Non Detect
AD	Asbestos Detected

TABLE D3: SUMMARY OF ANALYTICAL RESULTS FOR WASTE CLASSIFICATION

Analyte			Heavy Metals								PAHs			BTEX					TRH		PCB	OCP	Asbestos	
			Total (mg/kg)						TCLP (mg/L)		Total (mg/kg)		TCLP (mg/L)	Total (mg/kg)					Total (mg/kg)		(mg/kg)	(mg/kg)		
			Arsenic	Cadmium	Chromium	Lead	Mercury	Nickel	Lead	Nickel	Benzo(a)Pyrene	Total PAH	Benzo(a)Pyrene	Benzene	Toluene	Ethylbenzene	Xylene	C6-C9	C10-C36	Total PCB	Total OCP (scheduled chemicals)	Asbestos in Soil	Asbestos Material (Fragment)
Practical Quantitation Limit (PQL)			4	0.4	1	1	0.1	1	0.03	0.02	0.05	0.05	0.0001	0.2	0.5	1	3	25	250	0.7	2		
General Solid Waste (CT1)			100	20	100	100	4	40			0.8	200		10	288	600	1000	650	10000	<50	<50		
General Solid Waste (SCC1/TCLP1)			500	100	1900	1500	50	1050	5	2	10	200	0.04	0.5	518	1080	1800	650	10000	<50	<50		
Restricted Solid Waste (CT2)			400	80	400	400	16	160			3.2	800		40	1152	2400	4000	2600	40000	<50	<50		
Restricted Solid Waste (SSC2/TCLP2)			2000	400	7600	6000	200	4200	20	8	23	800	0.16	40	2073	4320	7200	2600	40000	<50	<50		
Special Waste (Asbestos Waste)																						AD	AD
Sample ID	**Date Sampled**	**Depth (m)**																					
S-02188.001-TP01_0.1	1/10/2020	0.1	13	ND	9	72	ND	12	-	-	0.2	1.9	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP01_1.0	1/10/2020	1	ND	ND	7	39	ND	2	-	-	0.2	2.7	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP02_0.1	1/10/2020	0.1	ND	ND	30	9	ND	43	-	0.3	0.06	0.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP02_0.9	1/10/2020	0.9	14	ND	7	13	ND	10	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP03_0.1	1/10/2020	0.1	5	ND	13	55	0.1	10	-	-	1.5	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP03_1.0	1/10/2020	1	ND	ND	6	41	0.2	1	-	-	0.09	0.66	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP04_0.3	1/10/2020	0.3	5	ND	5	17	ND	5	-	-	ND	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP05_0.1	1/10/2020	0.1	5	ND	10	11	ND	5	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP05_1.0	1/10/2020	1	ND	ND	11	29	ND	4	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP06_0.1	1/10/2020	0.1	ND	ND	7	8	ND	1	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP07_0.1	1/10/2020	0.1	ND	ND	21	15	ND	8	-	-	ND	0.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP07_1.0	1/10/2020	1	ND	ND	10	6	ND	11	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-

TABLE D3: SUMMARY OF ANALYTICAL RESULTS FOR WASTE CLASSIFICATION

Analyte			Heavy Metals								PAHs			BTEX					TRH		PCB	OCP	Asbestos	
			Total (mg/kg)						TCLP (mg/L)		Total (mg/kg)		TCLP (mg/L)	Total (mg/kg)					Total (mg/kg)		(mg/kg)	(mg/kg)		
			Arsenic	Cadmium	Chromium	Lead	Mercury	Nickel	Lead	Nickel	Benzo(a)Pyrene	Total PAH	Benzo(a)Pyrene	Benzene	Toluene	Ethylbenzene	Xylene	C6-C9	C10-C36	Total PCB	Total OCP (scheduled chemicals)	Asbestos in Soil	Asbestos Material (Fragment)
Practical Quantitation Limit (PQL)			4	0.4	1	1	0.1	1	0.03	0.02	0.05	0.05	0.0001	0.2	0.5	1	3	25	250	0.7	2		
General Solid Waste (CT1)			100	20	100	100	4	40			0.8	200		10	288	600	1000	650	10000	<50	<50		
General Solid Waste (SCC1/TCLP1)			500	100	1900	1500	50	1050	5	2	10	200	0.04	0.5	518	1080	1800	650	10000	<50	<50		
Restricted Solid Waste (CT2)			400	80	400	400	16	160			3.2	800		40	1152	2400	4000	2600	40000	<50	<50		
Restricted Solid Waste (SSC2/TCLP2)			2000	400	7600	6000	200	4200	20	8	23	800	0.16	40	2073	4320	7200	2600	40000	<50	<50		
Special Waste (Asbestos Waste)																						AD	AD
Sample ID	**Date Sampled**	**Depth (m)**																					
S-02188.001-TP08_0.2	1/10/2020	0.2	ND	ND	7	6	ND	ND	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP08_1.0	1/10/2020	1	4	ND	12	22	ND	5	-	-	0.71	7.9	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP09_0.1	1/10/2020	0.1	4	ND	10	15	ND	8	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP09_1.5	1/10/2020	1.5	5	ND	10	22	ND	5	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP10_0.2	1/10/2020	0.2	ND	ND	5	9	ND	2	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP10_0.9	1/10/2020	0.9	ND	ND	5	5	ND	ND	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP11_0.1	1/10/2020	0.1	4	ND	13	14	ND	17	-	-	0.1	0.83	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP11_1.0	1/10/2020	1	ND	ND	5	5	ND	ND	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP12_0.2	1/10/2020	0.2	ND	ND	5	6	ND	5	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP12_1.0	1/10/2020	1	ND	ND	9	9	ND	2	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP13_0.3	1/10/2020	0.3	ND	ND	9	23	ND	12	-	-	ND	0.1	-	ND	ND	ND	ND	ND	290	ND	ND	ND	-
S-02188.001-TP13_1.0	1/10/2020	1	ND	ND	5	7	ND	2	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP13_1.3	1/10/2020	1.3	12	ND	12	240	0.3	11	ND	-	0.05	0.4	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
S-02188.001-TP14_0.3	1/10/2020	0.3	ND	ND	12	22	ND	4	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP14_1.0	1/10/2020	1	ND	ND	4	6	ND	2	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP15_0.1	1/10/2020	0.1	ND	ND	9	25	ND	10	-	-	ND	0.3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-

TABLE D3: SUMMARY OF ANALYTICAL RESULTS FOR WASTE CLASSIFICATION

Analyte			Heavy Metals								PAHs			BTEX					TRH		PCB	OCP	Asbestos	
			Total (mg/kg)						TCLP (mg/L)		Total (mg/kg)		TCLP (mg/L)	Total (mg/kg)					Total (mg/kg)		(mg/kg)	(mg/kg)		
			Arsenic	Cadmium	Chromium	Lead	Mercury	Nickel	Lead	Nickel	Benzo(a)Pyrene	Total PAH	Benzo(a)Pyrene	Benzene	Toluene	Ethylbenzene	Xylene	C6-C9	C10-C36	Total PCB	Total OCP (scheduled chemicals)	Asbestos in Soil	Asbestos Material (Fragment)
Practical Quantitation Limit (PQL)			4	0.4	1	1	0.1	1	0.03	0.02	0.05	0.05	0.0001	0.2	0.5	1	3	25	250	0.7	2		
General Solid Waste (CT1)			100	20	100	100	4	40			0.8	200		10	288	600	1000	650	10000	<50	<50		
General Solid Waste (SCC1/TCLP1)			500	100	1900	1500	50	1050	5	2	10	200	0.04	0.5	518	1080	1800	650	10000	<50	<50		
Restricted Solid Waste (CT2)			400	80	400	400	16	160			3.2	800		40	1152	2400	4000	2600	40000	<50	<50		
Restricted Solid Waste (SSC2/TCLP2)			2000	400	7600	6000	200	4200	20	8	23	800	0.16	40	2073	4320	7200	2600	40000	<50	<50		
Special Waste (Asbestos Waste)																						AD	AD
Sample ID	**Date Sampled**	**Depth (m)**																					
S-02188.001-TP15_1.0	1/10/2020	1	ND	ND	8	24	ND	8	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP16_0.1	1/10/2020	0.1	5	ND	15	11	ND	13	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP16_1.0	1/10/2020	1	6	ND	11	14	ND	3	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP17_0.1	1/10/2020	0.1	ND	ND	7	6	ND	5	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP17_0.5	1/10/2020	0.5	ND	ND	8	7	ND	1	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP18_0.1	1/10/2020	0.1	ND	ND	9	15	ND	8	-	-	0.1	1.4	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP18_0.5	1/10/2020	0.5	ND	ND	9	17	ND	9	-	-	0.08	0.4	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP19_0.1	1/10/2020	0.1	ND	ND	23	5	ND	41	-		ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
S-02188.001-TP19_0.3	1/10/2020	0.3	ND	ND	18	5	ND	38	-	-	ND	ND	-	ND	ND	ND	ND	ND	310	ND	ND	ND	
S-02188.001-TP19_0.5	1/10/2020	0.5	ND	ND	17	48	ND	27	-	-	1.8	27	ND	ND	ND	ND	ND	ND	420	ND	ND	ND	
S-02188.001-TP19_1.5	1/10/2020	1.5	4	ND	10	39	ND	ND	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
S-02188.001-TP20_0.1	1/10/2020	0.1	ND	ND	17	6	ND	34	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-TP20_1.0	1/10/2020	1	ND	ND	16	33	ND	1	-	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
S-02188.001-AS001									-														AD

Legend	
ND	Non Detect
AD	Asbestos Detected
Coloured Concentration	Criteria Exceeded

TABLE D4: QA/QC RESULTS SUMMARY

			Lab Report Ref:	Envirolab Ref: 252698-01	Envirolab Ref: 252698-80		Envirolab Ref: 252698-01	ALS Ref: ES2034920-001	
			Field ID:	S-02188.001-TP01_0.1	S-02188.001-QA01		S-02188.001-TP01_0.1	S-02188.001-QA02	
			Sampled Date:	1/10/2020	1/10/2020		1/10/2020	1/10/2020	
Chem_Group	**ChemName**	**Units**	**PQL**			**RPD****			**RPD****
BTEX	Benzene	mg/kg	0.2	ND*	ND	-	ND	ND	-
	Ethylbenzene	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Toluene	mg/kg	0.5	ND	ND	-	ND	ND	-
	Xylene (m & p)	mg/kg	2.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Xylene (o)	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Total Xylene	mg/kg	3.0 (Primary) 0.5 (Interlab)	ND	ND	-	ND	ND	-
Metals	Arsenic	mg/kg	4 (Primary): 5 (Interlab)	13	25	**-63**	13	11	17
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	ND	ND	-	ND	ND	-
	Chromium (III+VI)	mg/kg	1	9	9	0	9	9	0
	Copper	mg/kg	1 (Primary): 5 (Interlab)	19	19	0	19	21	-10
	Lead	mg/kg	1 (Primary): 5 (Interlab)	72	78	-8	72	59	20
	Mercury	mg/kg	0.1	ND	ND	-	ND	ND	-
	Nickel	mg/kg	1 (Primary): 2 (Interlab)	12	12	0	12	16	-29
	Zinc	mg/kg	1 (Primary): 5 (Interlab)	99	86	14	99	93	6
OCP	4,4-DDE	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	a-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Aldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	d-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDT	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDT+DDE+DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Dieldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endosulfan (I & II)	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endrin aldehyde	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	g-BHC (Lindane)	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Heptachlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Heptachlor epoxide	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Methoxychlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
PAH/Phenols	Acenaphthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Acenaphthylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benz(a)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.2	0.1	**67**	0.2	0.5	**-86**
	Benzo(a) pyrene	mg/kg	0.05 (Primary): 0.5 (Interlab)	0.2	0.1	**67**	ND	ND	-
	Benzo(g,h,i)perylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.2	0.1	**67**	ND	ND	-
	Chrysene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.1	0.1	0	0.1	0.5	**-133**
	Dibenz(a,h)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluoranthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.4	0.3	29	0.4	0.5	-22
	Fluorene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.1	0.1	0	ND	ND	-
	Naphthalene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Phenanthrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.2	ND	-	0.2	0.5	**-86**
	Benzo(b+j+k)fluoranthene	mg/kg	0.2	0.2	0.2	0	0.2	0.5	**-86**
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	0.2	0.2	0	0.2	0.5	**-86**
	Pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.4	0.3	29	0.4	0.6	-40
PCB	Arochlor 1016	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1221	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1232	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1242	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1248	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1254	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1260	mg/kg	0.1	-	-	-	-	-	-
	Total PCBs	mg/kg	0.7	-	-	-	-	-	-
TRH	C6-C10	mg/kg	25	ND	ND	-	ND	ND	-
	C10-C16	mg/kg	50	ND	ND	-	ND	ND	-
	C16-C34	mg/kg	100	ND	ND	-	ND	ND	-
	C34-C40	mg/kg	100	ND	ND	-	ND	ND	-
	C6-C10 less BTEX (F1)	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	F2-NAPHTHALENE	mg/kg	50	ND	ND	-	ND	ND	-
	C10 - C14	mg/kg	50	ND	ND	-	ND	ND	-
	C6 - C9	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	C15 - C28	mg/kg	100	ND	ND	-	ND	ND	-
	C29-C36	mg/kg	100	ND	ND	-	ND	ND	-

*ND = Non Detect

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

**High RPDs are in bold (Acceptable RPDs for each PQL multiplier range are: 80 (1-10 x PQL); 50 (10-30 x PQL); 30 (> 30 x PQL).

TABLE D4: QA/QC RESULTS SUMMARY

			Lab Report Ref:	Envirolab Ref: 252698-10	Envirolab Ref: 252698-81		Envirolab Ref: 252698-10	ALS Ref: ES2034920-002	
			Field ID:	S-02188.001-TP04_1.2	S-02188.001-QA03		S-02188.001-TP04_1.2	S-02188.001-QA04	
			Sampled Date:	1/10/2020	1/10/2020		1/10/2020	1/10/2020	
Chem_Group	**ChemName**	**Units**	**PQL**			**RPD****			**RPD****
BTEX	Benzene	mg/kg	0.2	ND*	ND	-	ND	ND	-
	Ethylbenzene	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Toluene	mg/kg	0.5	ND	ND	-	ND	ND	-
	Xylene (m & p)	mg/kg	2.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Xylene (o)	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Total Xylene	mg/kg	3.0 (Primary) 0.5 (Interlab)	ND	ND	-	ND	ND	-
Metals	Arsenic	mg/kg	4 (Primary): 5 (Interlab)	ND	ND	-	ND	ND	-
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	ND	ND	-	ND	ND	-
	Chromium (III+VI)	mg/kg	1	4	6	-40	4	5	-22
	Copper	mg/kg	1 (Primary): 5 (Interlab)	1	1	0	1	5	**-133**
	Lead	mg/kg	1 (Primary): 5 (Interlab)	3	5	-50	3	5	-50
	Mercury	mg/kg	0.1	ND	ND	-	ND	ND	-
	Nickel	mg/kg	1 (Primary): 2 (Interlab)	ND	ND	-	ND	ND	-
	Zinc	mg/kg	1 (Primary): 5 (Interlab)	ND	ND	-	ND	ND	-
OCP	4,4-DDE	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	a-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Aldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	d-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDT	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDT+DDE+DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Dieldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endosulfan (I & II)	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endrin aldehyde	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	g-BHC (Lindane)	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Heptachlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Heptachlor epoxide	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Methoxychlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
PAH/Phenols	Acenaphthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Acenaphthylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benz(a)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(a) pyrene	mg/kg	0.05 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(g,h,i)perylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Chrysene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Dibenz(a,h)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluoranthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluorene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Naphthalene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Phenanthrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(b+j+k)fluoranthene	mg/kg	0.2	ND	ND	-	ND	ND	-
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	ND	ND	-	ND	ND	-
	Pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
PCB	Arochlor 1016	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1221	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1232	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1242	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1248	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1254	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1260	mg/kg	0.1	ND	ND	-	ND	ND	-
	Total PCBs	mg/kg	0.7	ND	ND	-	ND	ND	-
TRH	C6-C10	mg/kg	25	ND	ND	-	ND	ND	-
	C10-C16	mg/kg	50	ND	ND	-	ND	ND	-
	C16-C34	mg/kg	100	ND	ND	-	ND	ND	-
	C34-C40	mg/kg	100	ND	ND	-	ND	ND	-
	C6-C10 less BTEX (F1)	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	F2-NAPHTHALENE	mg/kg	50	ND	ND	-	ND	ND	-
	C10 - C14	mg/kg	50	ND	ND	-	ND	ND	-
	C6 - C9	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	C15 - C28	mg/kg	100	ND	ND	-	ND	ND	-
	C29-C36	mg/kg	100	ND	ND	-	ND	ND	-

*ND = Non Detect

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

**High RPDs are in bold (Acceptable RPDs for each PQL multiplier range are: 80 (1-10 x PQL); 50 (10-30 x PQL); 30 (> 30 x PQL).

TABLE D4: QA/QC RESULTS SUMMARY

			Lab Report Ref:	Envirolab Ref: 252698-37	Envirolab Ref: 252698-82		Envirolab Ref: 252698-37	ALS Ref: ES2034920-003	
			Field ID:	S-02188.001-TP11_1.0	S-02188.001-QA05		S-02188.001-TP11_1.0	S-02188.001-QA06	
			Sampled Date:	1/10/2020	1/10/2020		1/10/2020	1/10/2020	
Chem_Group	**ChemName**	**Units**	**PQL**			**RPD****			**RPD****
BTEX	Benzene	mg/kg	0.2	ND*	ND	-	ND	ND	-
	Ethylbenzene	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Toluene	mg/kg	0.5	ND	ND	-	ND	ND	-
	Xylene (m & p)	mg/kg	2.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Xylene (o)	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Total Xylene	mg/kg	3.0 (Primary) 0.5 (Interlab)	ND	ND	-	ND	ND	-
Metals	Arsenic	mg/kg	4 (Primary): 5 (Interlab)	4	4	0	4	5	-22
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	ND	ND	-	ND	ND	-
	Chromium (III+VI)	mg/kg	1	13	8	48	13	14	-7
	Copper	mg/kg	1 (Primary): 5 (Interlab)	22	1	**183**	22	5	**126**
	Lead	mg/kg	1 (Primary): 5 (Interlab)	14	5	**95**	14	6	**80**
	Mercury	mg/kg	0.1	ND	ND	-	ND	ND	-
	Nickel	mg/kg	1 (Primary): 2 (Interlab)	17	1	**178**	17	2	**158**
	Zinc	mg/kg	1 (Primary): 5 (Interlab)	55	2	**186**	55	5	**167**
OCP	4,4-DDE	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	a-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Aldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	d-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDT	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	DDT+DDE+DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Dieldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endosulfan (I & II)	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Endrin aldehyde	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	g-BHC (Lindane)	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Heptachlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Heptachlor epoxide	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
	Methoxychlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	-	-	-	-	-	-
PAH/Phenols	Acenaphthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Acenaphthylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benz(a)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(a) pyrene	mg/kg	0.05 (Primary): 0.5 (Interlab)	0.1	0.05	**67**	0.1	0.05	**67**
	Benzo(g,h,i)perylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.05	0.1	**-67**	0.05	0.05	0
	Chrysene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.1	0.1	0	0.1	0.05	**67**
	Dibenz(a,h)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluoranthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.2	0.1	**67**	0.2	0.05	**120**
	Fluorene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Naphthalene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Phenanthrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(b+j+k)fluoranthene	mg/kg	0.2	ND	ND	-	ND	ND	-
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	ND	ND	-	ND	ND	-
	Pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	0.2	0.1	**67**	0.2	0.05	**120**
PCB	Arochlor 1016	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1221	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1232	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1242	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1248	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1254	mg/kg	0.1	-	-	-	-	-	-
	Arochlor 1260	mg/kg	0.1	-	-	-	-	-	-
	Total PCBs	mg/kg	0.7	-	-	-	-	-	-
TRH	C6-C10	mg/kg	25	ND	ND	-	ND	ND	-
	C10-C16	mg/kg	50	ND	ND	-	ND	ND	-
	C16-C34	mg/kg	100	ND	ND	-	ND	ND	-
	C34-C40	mg/kg	100	100	100	0	ND	ND	-
	C6-C10 less BTEX (F1)	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	F2-NAPHTHALENE	mg/kg	50	ND	ND	-	ND	ND	-
	C10 - C14	mg/kg	50	ND	ND	-	ND	ND	-
	C6 - C9	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	C15 - C28	mg/kg	100	ND	ND	-	ND	ND	-
	C29-C36	mg/kg	100	ND	ND	-	ND	ND	-

*ND = Non Detect

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

**High RPDs are in bold (Acceptable RPDs for each PQL multiplier range are: 80 (1-10 x PQL); 50 (10-30 x PQL); 30 (> 30 x PQL).

TABLE D4: QA/QC RESULTS SUMMARY

			Lab Report Ref:	Envirolab Ref: 252698-68	Envirolab Ref: 252698-82		Envirolab Ref: 252698-68	ALS Ref: ES2034920-004	
			Field ID:	S-02188.001-TP17_1.1	S-02188.001-QA07		S-02188.001-TP17_1.1	S-02188.001-QA08	
			Sampled Date:	1/10/2020	1/10/2020		1/10/2020	1/10/2020	
Chem_Group	ChemName	Units	PQL			RPD**			RPD**
BTEX	Benzene	mg/kg	0.2	ND*	ND	-	ND	ND	-
	Ethylbenzene	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Toluene	mg/kg	0.5	ND	ND	-	ND	ND	-
	Xylene (m & p)	mg/kg	2.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Xylene (o)	mg/kg	1.0 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Total Xylene	mg/kg	3.0 (Primary) 0.5 (Interlab)	ND	ND	-	ND	ND	-
Metals	Arsenic	mg/kg	4 (Primary): 5 (Interlab)	4	4	0	4	5	-22
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab)	ND	ND	-	ND	ND	-
	Chromium (III+VI)	mg/kg	1	7	8	-13	7	6	15
	Copper	mg/kg	1 (Primary): 5 (Interlab)	1	2	**-67**	1	5	**-133**
	Lead	mg/kg	1 (Primary): 5 (Interlab)	7	9	-25	7	7	0
	Mercury	mg/kg	0.1	ND	ND	-	ND	ND	-
	Nickel	mg/kg	1 (Primary): 2 (Interlab)	3	3	0	3	2	40
	Zinc	mg/kg	1 (Primary): 5 (Interlab)	7	10	-35	7	5	33
OCP	4,4-DDE	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	a-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Aldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	d-BHC	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDT	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	DDT+DDE+DDD	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Dieldrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endosulfan (I & II)	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endrin	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Endrin aldehyde	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	g-BHC (Lindane)	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Heptachlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Heptachlor epoxide	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
	Methoxychlor	mg/kg	0.1 (Primary): 0.05 (Interlab)	ND	ND	-	ND	ND	-
PAH/Phenols	Acenaphthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Acenaphthylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benz(a)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(a) pyrene	mg/kg	0.05 (Primary): 0.5 (Interlab)	0.1	0.05	**67**	0.1	0.5	**-133**
	Benzo(g,h,i)perylene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Chrysene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Dibenz(a,h)anthracene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluoranthene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Fluorene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Naphthalene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Phenanthrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
	Benzo(b+j+k)fluoranthene	mg/kg	0.2	ND	ND	-	ND	ND	-
	Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	ND	ND	-	ND	ND	-
	Pyrene	mg/kg	0.1 (Primary): 0.5 (Interlab)	ND	ND	-	ND	ND	-
PCB	Arochlor 1016	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1221	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1232	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1242	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1248	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1254	mg/kg	0.1	ND	ND	-	ND	ND	-
	Arochlor 1260	mg/kg	0.1	ND	ND	-	ND	ND	-
	Total PCBs	mg/kg	0.7	ND	ND	-	ND	ND	-
TRH	C6-C10	mg/kg	25	ND	ND	-	ND	ND	-
	C10-C16	mg/kg	50	ND	ND	-	ND	ND	-
	C16-C34	mg/kg	100	ND	ND	-	ND	ND	-
	C34-C40	mg/kg	100	ND	ND	-	ND	ND	-
	C6-C10 less BTEX (F1)	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	F2-NAPHTHALENE	mg/kg	50	ND	ND	-	ND	ND	-
	C10 - C14	mg/kg	50	ND	ND	-	ND	ND	-
	C6 - C9	mg/kg	25 (Primary): 10 (Interlab)	ND	ND	-	ND	ND	-
	C15 - C28	mg/kg	100	ND	ND	-	ND	ND	-
	C29-C36	mg/kg	100	ND	ND	-	ND	ND	-

*ND = Non Detect

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

**High RPDs are in bold (Acceptable RPDs for each PQL multiplier range are: 80 (1-10 x PQL); 50 (10-30 x PQL); 30 (> 30 x PQL).

Appendix E: Quality Assurance / Quality Control

SOIL SAMPLE LOCATION AND ANALYSIS

Details of the samples collected and analysed as part of this investigation are provided in **Table E1** below.

Table E1: Soil Sample Location and Analysis

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
TP01	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil.
TP01	1.0.m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil,
TP02	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil, TCLP (Nickel)
TP02	0.5 m	1 October 2020	Within area of historical filling	On hold
TP02	0.9 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP03	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil, TCLP (PAH)
TP03	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP03	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP04	0.3 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP04	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP05	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP05	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP05	1.4 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH01	2.0 m	2 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil,

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
				sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH01	3.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH01	4.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH01	5.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP06	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP06	1.0 m	1 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP07	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP07	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP07	1.3 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
BH05	2.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH05	3.0 m	2 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH05	4.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH05	5.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP08	0.2 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP08	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP08	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
TP09	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP09	1.0 m	1 October 2020	Within area of historical filling	On hold
TP09	1.5 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP10	0.2 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP10	0.9 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP10	1.0 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP11	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP11	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP11	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
TP12	0.2 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP12	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP12	1.3 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
TP13	0.3 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP13	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP13	1.3 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
BH02	2.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test
BH02	3.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test
BH02	4.0 m	2 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
BH02	5.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test
TP14	0.3 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP14	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP14	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
TP15	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP15	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP15	1.4 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH03	2.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH03	3.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH03	4.0 m	2 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH03	5.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP16	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
TP16	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP16	1.2 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
BH04	2.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test
BH04	3.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH04	4.0 m	2 October 2020	Within natural soils suspected to be ASS	sPOCAS Field Test, Chromium Reducible Sulfur Suite.
BH04	5.0 m	2 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
TP17	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP17	0.5 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP17	1.1 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test
TP18	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP18	0.5 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP18	1.0 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test, Chromium Reducible Sulfur Suite.
TP19	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil
TP19	0.3 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil
TP19	0.5 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil
TP19	1.5 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil
TP20	0.1 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil

Sample Location	Depth (m)	Date	Justification	CoPC/Analysis
TP20	1.0 m	1 October 2020	Within area of historical filling	Metals, TRH, BTEXN, PAHs, pH, EC, Foreign Materials, Asbestos in Soil
TP20	1.5 m	1 October 2020	Within natural soils suspected to be ASS	Metals, TRH, BTEXN, PAHs, PCBs, OCP/OPP, Asbestos in Soil, sPOCAS Field Test

DATA QUALITY OBJECTIVES

Systematic planning and verification is critical to successful implementation of the SCA to ensure that the data is reliable and representative. A process for establishing DQOs for an investigation has been defined by the United States Environmental Protection Agency (US EPA). That process has been adopted by AS4482.1-2005 and referenced in NEPM 2013.

DQOs ensure that:

- The study objectives are set;
- Appropriate types of data are collected (based on potential sources of contamination and CoPC); and
- The tolerance levels are set for potential decision-making errors.

The DQO process is a seven-step iterative planning approach used to plan for environmental data collection activities. It provides a systematic approach for defining the criteria that a data collection design should satisfy, including when, where and how to collect samples or measurements, determination of tolerable decision error rates and the number of samples or measurements that should be collected. The seven-step process for this investigation is discussed and summarised in **Table E2.**

Table E2: Data Quality Objectives

Process	DQO
Step 1: State the Problem	There was the potential for contaminants to be present within the in-situ soils at the site as a result of the historical site uses at concentrations that may pose a risk to human health and the environment.
Step 2: Identify the Decisions	The decisions to be made based on the results of the risk assessment were as follows: • Are CoPC present within soil, and if so, do they present an unacceptable risk to human health and the environment based the proposed soil disturbance during the planned earthworks and in light of the ongoing residential use • If soil contamination is identified, does this pose a potentially unacceptable risk to human health and the environment? • Do in-situ soils at the site meet the definition of ENM? • What is the waste classification of the soils that require offsite disposal?
Step 3: Identify Inputs in the Decision	The inputs required to make the above decisions were as follows: • Site setting and available background information and previous analytical data; • Selection of appropriate Tier 1 soil assessment criteria; • Visual observations; and • Field and laboratory analytical results.
Step 4: Define Boundaries of the Study	The geographical limits appropriate for the data collection and decision making in this investigation comprised the soils within the Stage 3 development with an approximate area of 8,884 m^2 as shown on **Figure 2** provided in **Appendix A.**
Step 5: Develop a Decision Rule	The adopted site assessment criteria for the CoPC within the soils during this assessment are outlined in **Section 10** of the report and presented in **Tables D1 – D3** provided in **Appendix A.** Based on the disturbance of the soils, the potential onsite application within an area onsite where the soil is accessible for residential uses. **<u>Human-Health Based Criteria</u>** • Where the data sets were not sufficiently populated to allow calculation of the 95% upper confidence limit (UCLmean) then the individual results must be less than the adopted criteria. If all the individual results are below the adopted criteria, then no additional assessment and/or management is required. Where individual results exceed that adopted criteria, then further assessment and/or management is required. • In accordance with the NEPM 2013, where 95% UCLmean of the average concentration for each soil analyte can be calculated, then the 95% UCLmean must be below the

Process	DQO
	adopted criteria; no single analyte concentration exceeds 250% of the adopted criteria; the standard deviation of the results must be less than 50% of the adopted criteria; and the normal distribution will only be used where the coefficient of variance is not greater than 1.2. • Allowances to these decision rules apply where alternative 95% UCL methods that are not based on normal or log-normal distributions are adopted. Where 95% UCLmean results exceed the criteria, then further assessment and/or management is required. • Asbestos contamination will be assessed based on exceedance of individual results, as statistical assessment is not applicable.
Step 6: Specify Limits on Decision Errors	The acceptable limits on decision errors applied during the assessment on the site and the manner of addressing possible decision errors were developed based on the DQIs of: • **Accuracy:** a quantitative measure of the closeness of reported data to the true value; • **Comparability:** a qualitative parameter expressing the confidence with which one data set can be compared with another; • **Completeness:** a measure of the amount of useable data (expressed as %) from a data collection activity; • **Representativeness:** the confidence (expressed qualitatively) that data are representative of each media present on the site; and • **Precision:** a quantitative measure of the variability (or reproducibility) of data. **Acceptance Limits for Decision Errors** The acceptable limits were as follows: • Individual or 95% UCLmean concentrations are below the adopted criteria; and • 95% of the data will satisfy the DQIs which were determined for completeness, representativeness, precision and accuracy of both field and laboratory data. Therefore, the limit on the decision error will be 5% that a conclusive statement may be incorrect.
Step 7: Optimise the Design	A systematic based sampling pattern was designed based on the findings of the desktop investigation. The suite of CoPC was selectively adopted for assessment to provide characterisation of the status of potential soil contamination based on the assessment of the potential source of contamination associated with historic landfilling at the site.

DATA QUALITY INDICATORS

The DQIs based on the DQOs for the assessment are presented in **Table E3.**

Table E3: DQO, Requirements and DQI

DQO	Requirement	DQI
Precision		
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standard and guidelines	Meet requirement
Field duplicates	1 per 10 primary samples for chemical contaminants (excluding asbestos)	Relative Percentage Difference (RPDs) < 50%
Laboratory duplicates	1 per batch per analyte	RPDs < 50 %
Accuracy		
Trip blanks	1 per batch of samples	Results < PQL
Trip spikes	1 per batch of samples	Recoveries 70 to 130%
Rinsate blanks	1 per piece of equipment per day of sampling	Results < PQL
Field blanks	1 per day of sampling	Results < PQL
Laboratory matrix spikes	1 per batch per volatile/semi-volatile analyte	Recoveries 70% to 130%
Laboratory surrogate spikes	1 per volatile/semi-volatile analyte sample (as appropriate)	Recoveries 70% to 130%
Laboratory control samples	At least 1 per batch per analyte tested	Result < PQL
Representativeness		
Sampling methodology – preservation	Appropriate for the sample type and analysis	Meet requirement
Samples extracted and analysed within holding times	Specific to each analyte	Meet requirement
Field equipment calibration	All field equipment calibrated, and calibration records provided	Meet requirement
Laboratory method banks	At least 1 per batch per analyte tested for	Result < PQL
Comparability		
Sampling approach	Consistent with each sample	Meet requirement
Analysis methodology	Consistent methodology for each sample	Meet requirement
Handling conditions and sampler	Consistent for each sample	Meet requirement
Field observations and analytical	Field observations support analytical results	Meet requirement
Consistent laboratory reporting limit	Consistent for each sample	Meet requirement
Completeness		
Sampling staff	Consistent sampling staff used	Meet requirement
Laboratory accreditation	NATA accredited laboratories and methods used	Meet requirement
Accredited methods	NATA accredited methods used appropriate for each analyte	Meet requirement
NEPM 2013 laboratory methods	Laboratory methods consistent with the NEPM 2013	Meet requirement
COC documentation	Appropriately completed	Meet requirement
Field sampling decontamination	Appropriately completed	Meet requirement

QUALITY ASSURANCE/ QUALITY CONTROL

Sampling Procedures

Fieldwork was undertaken by experienced EDP environmental consultants/LAAs in accordance with EDP's Standard Operating Procedures (SOPs) based on work practices defined by industry accepted standard practice and NEPM 2013.

Phosphate-free detergent was used to clean sampling instruments between sample locations. The sampling instruments were rinsed in deionised water and then sprayed with deionised water to minimise the potential for cross-contamination to occur.

Samples were placed directly into laboratory supplied jars and bags. The samples were stored on ice before being transported to the laboratory along with COC documentation, which is included in **Appendix F.**

Field Duplicates Samples

The purpose of field duplicate samples was to estimate the variability of a given characteristic or contaminant associated with a population.

Field duplicate soil samples were collected from soil immediately adjacent to the primary sample by placing approximately equal portions of the primary sample into two sample jars. Samples were labelled so as to conceal their relationship to the primary sample from the laboratory.

The blind and split duplicate samples analysed are outlined in **Table E4**

Table E4: Field Blind and Split Duplicate Samples Analysed

Medium	Primary Sample	Blind Duplicate	Split Duplicate	Analysis
Soil	S-02188.001_TP01-0.1	QA01	QA02	Metals, PAH, BTEX, TRH
Soil	S-02188.001_TP04-1.2	QA03	QA04	Metals, TRH, BTEXN, PAHs, OCP/OPP, PCBs
Soil	S-02188.001_TP11-1.0	QA05	QA06	Metals, PAH, BTEX, TRH
Soil	S-02188.001_TP17-1.1	QA07	QA08	Metals, TRH, BTEXN, PAHs, OCP/OPP, PCBs
Soil	S-02188.001_BH02-2.0	QA09	QA10	On hold

The quantity of duplicate samples analysed conformed to the frequency set in the DQI outlined in **Table E3.**

RPDs were calculated for each of the duplicate samples analysed. RPDs were calculated by dividing the difference between the primary sample and duplicate sample by the average of the two, as shown below:

$$RPD = \frac{(X_1 - X_2)}{(X_1 + X_2)/2} \times 100\%$$

Where: X_1 = Primary sample result; and

X_2 = Replicate sample result.

When calculating the RPDs, the following procedures were also considered:

- RPDs were only considered when a concentration was greater than the PQL; and
- In instances where results were greater than the PQL for the one sample, but below PQL for the corresponding primary or duplicate sample, a result equal to the PQL value was adopted where necessary in order to make a calculation possible.

RPDs for duplicate samples were calculated and the results are attached in **Table D4** provided in **Appendix D.**

RPDs for primary and duplicate samples were generally found to be within the acceptable limits, as summarised in **Table E5.**

Table E5: Field Blind and Split Duplicate RPD Results

Medium	Primary Sample	Blind Duplicate	Split Duplicate	Results
Soil	S-02188.001_TP01-0.1	QA01	QA02	RPD results were within the acceptable ranges set out in the DQIs in **Table E3**
Soil	S-02188.001_TP04-1.2	QA03	QA04	RPD results were within the acceptable ranges set out in the DQIs, with the exception of arsenic (-63%), benzo(a)anthracene (67% and -86%), benzo(a)pyrene (67%), chrysene (-133%), benzo(g,h,i) perylene (67%), phenanthrene (-86%), benzo(b+j+k)fluoranthene (-86%) and benzo(a)pyrene TEQ calc (Zero) (-86%).
Soil	S-02188.001_TP11-1.0	QA05	QA06	RPD results were within the acceptable ranges set out in the DQIs, with the exception of copper (-133%).
Soil	S-02188.001_TP17-1.1	QA07	QA08	RPD results were within the acceptable ranges set out in the DQIs, with the exception of copper (-67% and -133%), lead (95% and 80%), nickel (178 % and 158%), zinc (186 % and 167%), benzo(a)pyrene (67%), benzo(g,h,i) perylene (-67%), fluoranthene (67% and 120%) and pyrene (67% and 120%).
Soil	S-02188.001_BH02-2.0	QA09	QA06	RPD results were within the acceptable ranges set out in the DQIs, with the exception of copper (183% and 126%), and benzo(a)pyrene (67% and -133%).

The RPDs of the soil duplicated sample pairs were generally below the acceptable limits. The exceedance of RPDs from primary samples and duplicate samples were likely attributable to heterogeneity of the fill. The RPD exceedances are not deemed to indicate significant deficiencies in the sampling methodology but rather related primarily to variations within soil samples, given the percentage of samples reported within acceptable ranges and that none of the deficiencies exceeded the adopted investigation or screening criteria. Therefore, the elevated RPDs are not considered to affect the integrity of reliability of the overall results.

Blank and Spike Samples

Rinsate blanks, field blanks and trip blanks were collected and submitted for laboratory analysis as outlined in **Table E3.**

Rinsate blanks consist of pre-preserved bottles filled with laboratory prepared water that is passed over decontaminated field equipment and then collected in containers used for the sampling process. Rinsate blanks were preserved in a similar manner to the original samples. Rinsate blanks were a check on decontamination procedures.

Field blanks were used to assess if the ambient condition of the site may influence the quality of the samples and were prepared by filling distilled water into laboratory supplied sample bottles. The bottles were uncapped and left on-site for the duration of the sampling.

Trip blanks were used to assess the potential for cross contamination between transit from the site to the laboratory. Trip spikes were used to assess for the potential loss of volatile constituents from samples whilst in transit from the site to the laboratory. Trip blank and spike samples were prepared by the primary laboratory, carried to the field unopened and subjected to the same preservation methods as the primary field samples. Samples were analysed for volatile compounds.

Table E6: Blank and Spike Analytical Schedule

Type/Medium	Sample	Date	Analysis	Results
Trip Blank (Soil)	TB01	1/10/2020	TRH C_6 - C_9, TRH C_6 – C_{10} BTEXN	Concentrations were less than PQLs as outlined in DQIs
Trip Blank (Soil)	TB02	2/10/2020	TRH C_6 - C_9, TRH C_6 – C_{10} BTEXN	Concentrations were less than PQLs as outlined in DQIs
Trip Spike (Soil)	TS01	1/10/2020	BTEXN	Recoveries within acceptable limits as outlined by the DQIs.
Trip Spike (Soil)	TS02	2/10/2020	BTEXN	Recoveries within acceptable limits as outlined by the DQIs.
Rinsate Blank (Water)	RB01	1/10/2020	TRH, BTEXN, PAH, OCP/OPP, PCBs, metals	Concentrations were less than the DQIs.
Rinsate Blank (Water)	RB02	2/10/2020	TRH, BTEXN, PAH, OCP/OPP, PCBs, metals	Concentrations were less than the DQIs.
Field Blank (Water)	FB01	1/10/2020	-	On hold pending results.
Field Blank (Water)	FB02	2/10/2020	-	On hold pending results.

The quantity of blank and spike samples analysed conformed to the frequency set in the DQIs outlined in **Table E3.**

Based on the results it can be considered that:

- Decontamination procedures were adequate, and contaminants were unlikely to have been introduced by contact of the sampling equipment with the soil sampled; and
- Cross contamination from the atmosphere, in prepared deionised water or between transit of samples from the site to the laboratory was unlikely to have occurred.

Laboratory QA/QC

The laboratory conducted their own internal quality program for assessment of the repeatability of the analytical procedures and instrument accuracy under their NATA accreditation. This included analysis of laboratory blank samples, duplicate samples, spike samples, control samples and surrogate spikes. The laboratory QA/QC procedures and results are described within the laboratory reports presented in **Appendix F.**

The laboratory internal QA/QC sample results were reviewed and were consistent with the laboratory's NATA guidelines. Furthermore, the adoption of the general advisory ranges for specific recoveries has been used to screen laboratory data. Where recoveries were outside these ranges the data was assessed in relation to specific laboratory comments, published industry 'norms' for specific parameters and/or the likely impact on the interpretation of the meaning of the results.

Based on the reported laboratory QA/QC samples and methods used, the results were considered to be acceptable.

Summary

Based on the results of the QA/QC assessment, the data was appropriate for the objectives of the assessment. Given the level of field and laboratory QA measures adhered to, the level of QC analysis conducted was considered to be appropriate based on the sampling frequency and nature of the assessment and as such the DQIs outlined in **Table E3** are considered to have been met.

Appendix F: NATA Accredited Laboratory Reports

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt Myaree, WA 6154
Ph 08 9317 2505 / lab@mpl.com.au

Melbourne Lab - Envirolab Services
1A Dalmore Drive Scoresby VIC 3179
Ph 03 9763 2500 / melbourne@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
Ph 07 3266 9532 / brisbane@envirolab.com.au

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
Ph 0406 350 706 / adelaide@envirolab.com.au

Client: EDP Consultants	**Client Project Name / Number / Site etc (ie report title):** S-02188.001
Contact: Matthew Konza	
PM: Ryan Jacka	**PO No.:**
Sampler: Matthew Konza & Lochlan Browne	**Envirolab Quote No. :** 20SY005
Address: Suite 101, 52 Atchison Street, St Leonards NSW 2065	**Date results required:** **Or choose:** Standard *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: **Mob:** 0411 424 530	**Report format: esdat / equis /**
Email: ryan.jacka@edp-au.com; matthew.konza@edp-au.com; lochlan.browne@edp-au.com	**Lab Comments:**

Sample information					Tests Required														Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	ENM suite	Combo 6	Asb ID & weight	ASS field screen	ph & EC	On Hold	Send to ALS Combo 6 equivalent	TRH BTEX							Provide as much information about the sample as you can
1	S-02188.001-TP01_0.1	0.1	1/10/2020	Soil	X														
2	S-02188.001-TP01_1.0	1	1/10/2020	Soil	X														
MR	S-02188.001-TP01_1.2	1.2	1/10/2020	Soil		X		X	X										
3	S-02188.001-TP02_0.1	0.1	1/10/2020	Soil	X														
4	S-02188.001-TP02_0.5	0.5	1/10/2020	Soil						X									
5	S-02188.001-TP02_0.9	0.9	1/10/2020	Soil	X														
6	S-02188.001-TP03_0.1	0.1	1/10/2020	Soil	X														
7	S-02188.001-TP03_1.0	1	1/10/2020	Soil	X														
8	S-02188.001-TP03_1.2	1.2	1/10/2020	Soil		X		X	X										
9	S-02188.001-TP04_0.3	0.3	1/10/2020	Soil	X														
10	S-02188.001-TP04_1.2	1.2	1/10/2020	Soil		X		X	X										
11	S-02188.001-TP05_0.1	0.1	1/10/2020	Soil	X														
12	S-02188.001-TP05_1.0	1	1/10/2020	Soil	X														
13	S-02188.001-TP05_1.4	1.4	1/10/2020	Soil		X		X	X										
14	S-02188.001-BH01_2.0	2	2/10/2020	Soil		X		X	X										
15	S-02188.001-BH01_3.0	3	2/10/2020	Soil				X											
16	S-02188.001-BH01_4.0	4	2/10/2020	Soil				X											
17	S-02188.001-BH01_5.0	5	2/10/2020	Soil				X											
18	S-02188.001-TP06_0.1	0.1	1/10/2020	Soil	X														
19	S-02188.001-TP06_1.0	1	1/10/2020	Soil		X		X	X										
20	S-02188.001-TP07_0.1	0.1	1/10/2020	Soil	X														
21	S-02188.001-TP07_1.0	1	1/10/2020	Soil	X														
22	S-02188.001-TP07_1.3	1.3	1/10/2020	Soil		X		X	X										
23	S-02188.001-BH05_2.0	2	2/10/2020	Soil				X											

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

Job No: 252008
Date Received: 2/10
Time Received: 10:30
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

24	S-02188.001-BH05_3.0	3	2/10/2020	Soil		X		X	X												
25	S-02188.001-BH05_4.0	4	2/10/2020	Soil				X													
26	S-02188.001-BH05_5.0	5	2/10/2020	Soil				X													
27	S-02188.001-TP08_0.2	0.2	1/10/2020	Soil	X																
28	S-02188.001-TP08_1.0	1	1/10/2020	Soil	X																
29	S-02188.001-TP08_1.2	1.2	1/10/2020	Soil		X		X	X												
30	S-02188.001-TP09_0.1	0.1	1/10/2020	Soil	X																
31	S-02188.001-TP09_1.0	1	1/10/2020	Soil						X											
32	S-02188.001-TP09_1.5	1.5	1/10/2020	Soil	X																
33	S-02188.001-TP10_0.2 labeled as 0.1	0.2	1/10/2020	Soil	X																
34	S-02188.001-TP10_0.9	0.9	1/10/2020	Soil	X																
35	S-02188.001-TP10_1.0	1	1/10/2020	Soil		X		X	X												
36	S-02188.001-TP11_0.1	0.1	1/10/2020	Soil	X																
37	S-02188.001-TP11_1.0	1	1/10/2020	Soil	X																
38	S-02188.001-TP11_1.2	1.2	1/10/2020	Soil		X		X	X												
39	S-02188.001-TP12_0.2 labeled as 0.3	0.2	1/10/2020	Soil	X																
40	S-02188.001-TP12_1.0	1	1/10/2020	Soil	X																
41	S-02188.001-TP12_1.3	1.3	1/10/2020	Soil		X		X	X												
42	S-02188.001-TP13_0.3	0.3	1/10/2020	Soil	X																
43	S-02188.001-TP13_1.0	1	1/10/2020	Soil	X																
44	S-02188.001-TP13_1.3	1.3	1/10/2020	Soil		X		X	X												
45	S-02188.001-BH02_2.0	2	2/10/2020	Soil				X													
46	S-02188.001-BH02_3.0	3	2/10/2020	Soil				X													
47	S-02188.001-BH02_4.0	4	2/10/2020	Soil		X		X	X												
48	S-02188.001-BH02_5.0	5	2/10/2020	Soil				X													
49	S-02188.001-TP14_0.3 labeled as 0.2	0.3	1/10/2020	Soil	X																
50	S-02188.001-TP14_1.0	1	1/10/2020	Soil	X																
51	S-02188.001-TP14_1.2	1.2	1/10/2020	Soil		X		X	X												
52	S-02188.001-TP15_0.1	0.1	1/10/2020	Soil	X																
53	S-02188.001-TP15_1.0	1	1/10/2020	Soil	X																
54	S-02188.001-TP15_1.4	1.4	1/10/2020	Soil		X		X	X												
55	S-02188.001-BH03_2.0	2	2/10/2020	Soil				X													
56	S-02188.001-BH03_3.0	3	2/10/2020	Soil				X													
57	S-02188.001-BH03_4.0	4	2/10/2020	Soil		X		X	X												
58	S-02188.001-BH03_5.0	5	2/10/2020	Soil				X													
59	S-02188.001-TP16_0.1	0.1	1/10/2020	Soil	X																
60	S-02188.001-TP16_1.0	1	1/10/2020	Soil	X																
61	S-02188.001-TP16_1.2	1.2	1/10/2020	Soil		X		X	X												
62	S-02188.001-BH04_2.0	2	2/10/2020	Soil				X													
63	S-02188.001-BH04_3.0	3	2/10/2020	Soil				X													
64	S-02188.001-BH04_4.0	4	2/10/2020	Soil				X													
65	S-02188.001-BH04_5.0	5	2/10/2020	Soil		X		X	X												
66	S-02188.001-TP17_0.1	0.1	1/10/2020	Soil	X																
67	S-02188.001-TP17_0.5	0.5	1/10/2020	Soil	X																
68	S-02188.001-TP17_1.1	1.1	1/10/2020	Soil		X		X	X												

69	S-02188.001-TP18_0.1	0.1	1/10/2020	Soil	X															
70	S-02188.001-TP18_0.5	0.5	1/10/2020	Soil	X															
71	S-02188.001-TP18_1.0	1	1/10/2020	Soil		X		X	X											
72	S-02188.001-TP19_0.1	0.1	1/10/2020	Soil		X														
73	S-02188.001-TP19_0.3	0.3	1/10/2020	Soil		X														
74	S-02188.001-TP19_0.5	0.5	1/10/2020	Soil		X														
75	S-02188.001-TP19_1.5	1.5	1/10/2020	Soil		X														
76	S-02188.001-TP20_0.1	0.1	1/10/2020	Soil	X															
77	S-02188.001-TP20_1.0 (labeled as 0.5)	1	1/10/2020	Soil	X															
78	S-02188.001-TP20_1.5	1.5	1/10/2020	Soil		X		X	X											
79	S-02188.001-AS001	0.5	1/10/2020	Fragment			X													
80	S-02188.001-QA01 (labeled as QC01)		1/10/2020	Soil		X														
—	S-02188.001-QA02 (labeled as QC02)		1/10/2020	Soil							X									
81	S-02188.001-QA03		1/10/2020	Soil		X														
—	S-02188.001-QA04		1/10/2020	Soil							X									
82	S-02188.001-QA05		1/10/2020	Soil		X														
—	S-02188.001-QA06		1/10/2020	Soil							X									
83	S-02188.001-QA07		1/10/2020	Soil		X														
—	S-02188.001-QA08		1/10/2020	Soil							X									
84	S-02188.001-QA09		2/10/2020	Soil						X										
85	S-02188.001-QA10		2/10/2020	Soil						X										
86	S-02188.001-RB01		1/10/2020	Water		X														
87	S-02188.001-RB02		2/10/2020	Water		X														
88	S-02188.001-TB01		1/10/2020	Soil								X								
89	S-02188.001-TB02		2/10/2020	Soil								X								
90	S-02188.001-TS01		1/10/2020	Soil								X								
91	S-02188.001-TS02		2/10/2020	Soil								X								

Relinquished by (Company): EDP Consultants	Received by (Company): ECS	*Lab use only:*
Print Name: Matthew Konza	Print Name: Andy Zhang	Samples Received: Cool or Ambient (circle one)
Date & Time: 2/10/20	Date & Time: 2/10 3:10 PM	Temperature Received at: 12.9 (if applicable)
Signature:	Signature: AZ	Transported by: Hand delivered / courier

White - Lab copy / Blue - Client copy / Pink - Retain in Book Page No:

Extra:

92 S-02188.001-TP04_1.0. Soil Jar

93 S-02188.001-TP14_0.3 ↓ Bag

94. S-02188.001-TP14_1.0 ↓

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customerservice@envirolab.com.au
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Sample ID	Chromium Suite	On Hold
S-02188.001-BH04_5.0-5		✓
S-02188.001-TP17_0.1-0.1		✓
S-02188.001-TP17_0.5-0.5		✓
S-02188.001-TP17_1.1-1.1		✓
S-02188.001-TP18_0.1-0.1		✓
S-02188.001-TP18_0.5-0.5		✓
S-02188.001-TP18_1.0-1	✓	
S-02188.001-TP19_0.1-0.1		✓
S-02188.001-TP19_0.3-0.3		✓
S-02188.001-TP19_0.5-0.5		✓
S-02188.001-TP19_1.5-1.5		✓
S-02188.001-TP20_0.1-0.1		✓
S-02188.001-TP20_1.0-1		✓
S-02188.001-TP20_1.5-1.5		✓
S-02188.001-AS001-0.5		✓
S-02188.001-QA01		✓
S-02188.001-QA03		✓
S-02188.001-QA05		✓
S-02188.001-QA07		✓
S-02188.001-QA09		✓
S-02188.001-QA10		✓
S-02188.001-RB01		✓
S-02188.001-RB02		✓
S-02188.001-TB01		✓
S-02188.001-TB02		✓
S-02188.001-TS01		✓
S-02188.001-TS02		✓
S-02188.001-TP04_1.0-1.0		✓
S-02188.001-TP14_0.3-0.3		✓
S-02188.001-TP14_1.0-1.0		✓
S-02188.001-TP08_1.2 - [TRIPLICATE]-1.2		✓

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

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SAMPLE RECEIPT ADVICE

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne

Sample Login Details

Your reference	S-02188.001
Envirolab Reference	252698-A
Date Sample Received	02/10/2020
Date Instructions Received	27/10/2020
Date Results Expected to be Reported	27/10/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	93 soil, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
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:

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Sample ID	Chromium Suite	On Hold
S-02188.001-TP01_0.1-0.1		✓
S-02188.001-TP01_1.0-1		✓
S-02188.001-TP02_0.1-0.1		✓
S-02188.001-TP02_0.5-0.5		✓
S-02188.001-TP02_0.9-0.9		✓
S-02188.001-TP03_0.1-0.1		✓
S-02188.001-TP03_1.0-1		✓
S-02188.001-TP03_1.2-1.2	✓	
S-02188.001-TP04_0.3-0.3		✓
S-02188.001-TP04_1.2-1.2	✓	
S-02188.001-TP05_0.1-0.1		✓
S-02188.001-TP05_1.0-1		✓
S-02188.001-TP05_1.4-1.4	✓	
S-02188.001-BH01_2.0-2	✓	
S-02188.001-BH01_3.0-3	✓	
S-02188.001-BH01_4.0-4	✓	
S-02188.001-BH01_5.0-5	✓	
S-02188.001-TP06_0.1-0.1		✓
S-02188.001-TP06_1.0-1	✓	
S-02188.001-TP07_0.1-0.1		✓
S-02188.001-TP07_1.0-1		✓
S-02188.001-TP07_1.3-1.3		✓
S-02188.001-BH05_2.0-2	✓	
S-02188.001-BH05_3.0-3	✓	
S-02188.001-BH05_4.0-4	✓	
S-02188.001-BH05_5.0-5	✓	
S-02188.001-TP08_0.2-0.2		✓
S-02188.001-TP08_1.0-1		✓
S-02188.001-TP08_1.2-1.2		✓
S-02188.001-TP09_0.1-0.1		✓
S-02188.001-TP09_1.0-1		✓
S-02188.001-TP09_1.5-1.5	✓	

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Sample ID	Chromium Suite	On Hold
S-02188.001-TP10_0.2-0.2		✓
S-02188.001-TP10_0.9-0.9		✓
S-02188.001-TP10_1.0-1	✓	
S-02188.001-TP11_0.1-0.1		✓
S-02188.001-TP11_1.0-1		✓
S-02188.001-TP11_1.2-1.2		✓
S-02188.001-TP12_0.2-0.2		✓
S-02188.001-TP12_1.0-1		✓
S-02188.001-TP12_1.3-1.3		✓
S-02188.001-TP13_0.3-0.3		✓
S-02188.001-TP13_1.0-1		✓
S-02188.001-TP13_1.3-1.3		✓
S-02188.001-BH02_2.0-2		✓
S-02188.001-BH02_3.0-3		✓
S-02188.001-BH02_4.0-4		✓
S-02188.001-BH02_5.0-5		✓
S-02188.001-TP14_0.3-0.3		✓
S-02188.001-TP14_1.0-1		✓
S-02188.001-TP14_1.2-1.2		✓
S-02188.001-TP15_0.1-0.1		✓
S-02188.001-TP15_1.0-1		✓
S-02188.001-TP15_1.4-1.4	✓	
S-02188.001-BH03_2.0-2	✓	
S-02188.001-BH03_3.0-3	✓	
S-02188.001-BH03_4.0-4	✓	
S-02188.001-BH03_5.0-5	✓	
S-02188.001-TP16_0.1-0.1		✓
S-02188.001-TP16_1.0-1		✓
S-02188.001-TP16_1.2-1.2		✓
S-02188.001-BH04_2.0-2		✓
S-02188.001-BH04_3.0-3	✓	
S-02188.001-BH04_4.0-4	✓	

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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.

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CERTIFICATE OF ANALYSIS 252698

Client Details

Client	EDP Consultants Pty Ltd
Attention	Matthew Konza
Address	Suite 6/52 Atchison St, ST LEONARDS, NSW

Sample Details

Your Reference	**S-02188.001**
Number of Samples	93 soil, 1 material
Date samples received	02/10/2020
Date completed instructions received	02/10/2020

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	12/10/2020
Date of Issue	12/10/2020

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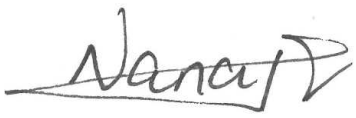
Asbestos Approved By
Analysed by Asbestos Approved Identifier: Wonnie Condos, Panika Wongchanda
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Team Leader, Inorganics
Dragana Tomas, Senior Chemist
Hannah Nguyen, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor
Lucy Zhu, Asbestos Supervisor
Manju Dewendrage, Chemist
Priya Samarawickrama, Senior Chemist
Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	116	113	121	108	104

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	94	125	108	113

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	126	123	126	123	122

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	115	122	110	133	129

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	125	118	122	130	124

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	125	130	121	117	115

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	124	116	132	129	120

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	124	123	121	120	122

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	117	121	127	129	126

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	97	125	119	121	125

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-72
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP19_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	129	117	120	129

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-73	252698-74	252698-75	252698-76	252698-77
Your Reference	UNITS	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_0.1	S-02188.001-TP20_1.0
Depth		0.3	0.5	1.5	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	127	120	128	118	122

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		252698-78	252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-TP20_1.5	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		1.5	-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	124	117	124	127	124

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		252698-88	252698-89	252698-90	252698-91
Your Reference	UNITS	S-02188.001-TB01	S-02188.001-TB02	S-02188.001-TS01	S-02188.001-TS02
Depth		-	-	-	-
Date Sampled		1/10/2020	02/10/2020	1/10/2020	02/10/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	<25	<25	[NA]	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	104%	97%
Toluene	mg/kg	<0.5	<0.5	93%	95%
Ethylbenzene	mg/kg	<1	<1	105%	95%
m+p-xylene	mg/kg	<2	<2	103%	94%
o-Xylene	mg/kg	<1	<1	103%	94%
naphthalene	mg/kg	<1	<1	[NA]	[NA]
Total +ve Xylenes	mg/kg	<3	<3	[NA]	[NA]
Surrogate aaa-Trifluorotoluene	%	121	123	112	104

svTRH (C10-C40) in Soil						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	89	91	85	89

svTRH (C10-C40) in Soil						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	83	85	82	80	90

svTRH (C10-C40) in Soil						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	87	86	88	86	87

svTRH (C10-C40) in Soil						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	87	86	87	84

svTRH (C10-C40) in Soil						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	97	87	85	94	86

svTRH (C10-C40) in Soil						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	100	<50	<50
Surrogate o-Terphenyl	%	88	88	87	85	86

svTRH (C10-C40) in Soil						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	140	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	150	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	180	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	320	<50
Surrogate o-Terphenyl	%	88	82	81	82	82

svTRH (C10-C40) in Soil						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	93	93	102	91	91

svTRH (C10-C40) in Soil						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	88	108	91	92

svTRH (C10-C40) in Soil						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	100	90	88	89

svTRH (C10-C40) in Soil						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-72
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP19_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	91	89	89	88

svTRH (C10-C40) in Soil						
Our Reference		252698-73	252698-74	252698-75	252698-76	252698-77
Your Reference	UNITS	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_0.1	S-02188.001-TP20_1.0
Depth		0.3	0.5	1.5	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	260	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	310	420	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	260	550	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	230	270	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	480	820	<50	<50	<50
Surrogate o-Terphenyl	%	90	99	91	89	89

svTRH (C10-C40) in Soil						
Our Reference		252698-78	252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-TP20_1.5	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		1.5	-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	93	89	86	87	99

PAHs in Soil						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.2	<0.1	<0.1	1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Fluoranthene	mg/kg	0.4	0.6	<0.1	<0.1	3.2
Pyrene	mg/kg	0.4	0.6	0.1	<0.1	3.0
Benzo(a)anthracene	mg/kg	0.2	0.2	<0.1	<0.1	1.2
Chrysene	mg/kg	0.1	0.2	<0.1	<0.1	1.0
Benzo(b,j+k)fluoranthene	mg/kg	0.2	0.4	<0.2	<0.2	2.4
Benzo(a)pyrene	mg/kg	0.2	0.2	0.06	<0.05	1.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0.2	<0.1	<0.1	1.0
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(g,h,i)perylene	mg/kg	0.2	0.2	<0.1	<0.1	1.3
Total +ve PAH's	mg/kg	1.9	2.7	0.2	<0.05	16
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	2.1
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	2.1
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	2.1
Surrogate p-Terphenyl-d14	%	98	101	99	98	104

PAHs in Soil						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	0.2	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.09	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.66	<0.05	0.3	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	99	98	98	94

PAHs in Soil						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.3	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.3	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	94	100	93	95	96

PAHs in Soil						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.5	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.4	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	0.3	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.1	<0.05	2.1	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	97	97	101	99	96

PAHs in Soil						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.6	0.2	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.6	0.4	<0.1	<0.1	<0.1
Pyrene	mg/kg	1.5	0.4	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.6	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.6	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	1	0.3	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.71	0.1	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.5	0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	7.9	1.7	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.9	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.0	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	99	105	100	101	99

PAHs in Soil						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.1	<0.05	0.07
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.83	<0.05	0.07
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	102	101	103	102

PAHs in Soil						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.4	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.4	0.1	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	99	99	100	102	102

PAHs in Soil						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	09/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.5	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	104	99	99	98	99

PAHs in Soil						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.2	0.3	<0.1
Pyrene	mg/kg	0.1	<0.1	0.2	0.4	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.05	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	0.3	<0.05	0.4	1.8	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	101	100	108	100	99

PAHs in Soil						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	99	101	101	103	101

PAHs in Soil						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-72
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP19_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	0.2	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.3	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	0.1	0.08	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.1	1.4	0.4	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	100	101	98	100

PAHs in Soil						
Our Reference		252698-73	252698-74	252698-75	252698-76	252698-77
Your Reference	UNITS	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_0.1	S-02188.001-TP20_1.0
Depth		0.3	0.5	1.5	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.5	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	0.6	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	4.3	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.9	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	6.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	4.5	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	2.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	1.6	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	2.6	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	1.8	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.7	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.8	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	27	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	2.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	2.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	2.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	99	99	101	105	104

PAHs in Soil						
Our Reference		252698-78	252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-TP20_1.5	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		1.5	-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.1	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.99	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	100	105	103	105

Organochlorine Pesticides in soil						
Our Reference		252698-8	252698-10	252698-13	252698-14	252698-19
Your Reference	UNITS	S-02188.001-TP03_1.2	S-02188.001-TP04_1.2	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_1.0
Depth		1.2	1.2	1.4	2	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	100	102	105	102

Organochlorine Pesticides in soil						
Our Reference		252698-22	252698-24	252698-29	252698-35	252698-38
Your Reference	UNITS	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_1.2	S-02188.001-TP10_1.0	S-02188.001-TP11_1.2
Depth		1.3	3	1.2	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	99	102	102	101

Organochlorine Pesticides in soil						
Our Reference		252698-41	252698-44	252698-47	252698-51	252698-54
Your Reference	UNITS	S-02188.001-TP12_1.3	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_1.2	S-02188.001-TP15_1.4
Depth		1.3	1.3	4	1.2	1.4
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	09/10/2020	09/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	103	99	98	109

Organochlorine Pesticides in soil						
Our Reference		252698-57	252698-61	252698-65	252698-68	252698-71
Your Reference	UNITS	S-02188.001-BH03_4.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_1.1	S-02188.001-TP18_1.0
Depth		4	1.2	5	1.1	1
Date Sampled		2/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	94	97	94

Organochlorine Pesticides in soil						
Our Reference		252698-72	252698-73	252698-74	252698-75	252698-78
Your Reference	UNITS	S-02188.001-TP19_0.1	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_1.5
Depth		0.1	0.3	0.5	1.5	1.5
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	91	88	95	92

Organochlorine Pesticides in soil					
Our Reference		252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	93	92	93

Organophosphorus Pesticides in Soil						
Our Reference		252698-8	252698-10	252698-13	252698-14	252698-19
Your Reference	UNITS	S-02188.001-TP03_1.2	S-02188.001-TP04_1.2	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_1.0
Depth		1.2	1.2	1.4	2	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	100	102	105	102

Organophosphorus Pesticides in Soil						
Our Reference		252698-22	252698-24	252698-29	252698-35	252698-38
Your Reference	UNITS	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_1.2	S-02188.001-TP10_1.0	S-02188.001-TP11_1.2
Depth		1.3	3	1.2	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	99	102	102	101

Organophosphorus Pesticides in Soil						
Our Reference		252698-41	252698-44	252698-47	252698-51	252698-54
Your Reference	UNITS	S-02188.001-TP12_1.3	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_1.2	S-02188.001-TP15_1.4
Depth		1.3	1.3	4	1.2	1.4
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	09/10/2020	09/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	103	99	98	109

Organophosphorus Pesticides in Soil						
Our Reference		252698-57	252698-61	252698-65	252698-68	252698-71
Your Reference	UNITS	S-02188.001-BH03_4.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_1.1	S-02188.001-TP18_1.0
Depth		4	1.2	5	1.1	1
Date Sampled		2/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	94	97	94

Organophosphorus Pesticides in Soil						
Our Reference		252698-72	252698-73	252698-74	252698-75	252698-78
Your Reference	UNITS	S-02188.001-TP19_0.1	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_1.5
Depth		0.1	0.3	0.5	1.5	1.5
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	91	88	95	92

Organophosphorus Pesticides in Soil					
Our Reference		252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	93	92	93

PCBs in Soil						
Our Reference		252698-8	252698-10	252698-13	252698-14	252698-19
Your Reference	UNITS	S-02188.001-TP03_1.2	S-02188.001-TP04_1.2	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_1.0
Depth		1.2	1.2	1.4	2	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	100	102	105	102

PCBs in Soil						
Our Reference		252698-22	252698-24	252698-29	252698-35	252698-38
Your Reference	UNITS	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_1.2	S-02188.001-TP10_1.0	S-02188.001-TP11_1.2
Depth		1.3	3	1.2	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	102	99	102	102	101

PCBs in Soil						
Our Reference		252698-41	252698-44	252698-47	252698-51	252698-54
Your Reference	UNITS	S-02188.001-TP12_1.3	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_1.2	S-02188.001-TP15_1.4
Depth		1.3	1.3	4	1.2	1.4
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	09/10/2020	09/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	103	99	98	109

PCBs in Soil						
Our Reference		252698-57	252698-61	252698-65	252698-68	252698-71
Your Reference	UNITS	S-02188.001-BH03_4.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_1.1	S-02188.001-TP18_1.0
Depth		4	1.2	5	1.1	1
Date Sampled		2/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	94	97	94

PCBs in Soil						
Our Reference		252698-72	252698-73	252698-74	252698-75	252698-78
Your Reference	UNITS	S-02188.001-TP19_0.1	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_1.5
Depth		0.1	0.3	0.5	1.5	1.5
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	91	88	95	92

PCBs in Soil					
Our Reference		252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	93	92	93

Acid Extractable metals in soil						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	13	<4	<4	14	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	7	30	7	13
Copper	mg/kg	19	13	26	9	22
Lead	mg/kg	72	39	9	13	55
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	12	2	43	10	10
Zinc	mg/kg	99	54	40	26	73

Acid Extractable metals in soil						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	<4	5	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	7	5	4	10
Copper	mg/kg	5	2	9	1	4
Lead	mg/kg	41	11	17	3	11
Mercury	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	3	5	<1	5
Zinc	mg/kg	11	5	41	<1	28

Acid Extractable metals in soil						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	11	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	7	6	7	11
Copper	mg/kg	6	2	2	<1	5
Lead	mg/kg	29	7	5	8	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	3	<1	1	5
Zinc	mg/kg	33	3	2	2	28

Acid Extractable metals in soil						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	<4	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	10	12	3	7
Copper	mg/kg	8	10	15	2	<1
Lead	mg/kg	15	6	76	3	6
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Nickel	mg/kg	8	11	5	<1	<1
Zinc	mg/kg	20	15	51	1	3

Acid Extractable metals in soil						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	4	<4	4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	6	10	10	5
Copper	mg/kg	8	2	8	6	2
Lead	mg/kg	22	8	15	22	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	4	8	5	2
Zinc	mg/kg	26	7	26	27	12

Acid Extractable metals in soil						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	14	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	7	13	5	9
Copper	mg/kg	<1	5	22	<1	5
Lead	mg/kg	5	13	14	5	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	4	17	<1	7
Zinc	mg/kg	26	10	55	7	19

Acid Extractable metals in soil						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	9	4	9	5
Copper	mg/kg	3	1	2	11	1
Lead	mg/kg	6	9	5	23	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	2	2	12	2
Zinc	mg/kg	6	3	9	59	4

Acid Extractable metals in soil						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	35	<4	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	3	12	4	7
Copper	mg/kg	66	6	5	1	5
Lead	mg/kg	240	4	22	6	15
Mercury	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	<1	4	2	4
Zinc	mg/kg	130	4	68	8	35

Acid Extractable metals in soil						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	<4	6	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	8	9	5	15
Copper	mg/kg	15	12	7	14	10
Lead	mg/kg	25	24	16	8	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	8	6	<1	13
Zinc	mg/kg	69	59	110	7	60

Acid Extractable metals in soil						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	6	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	6	6	7	8
Copper	mg/kg	8	6	10	9	<1
Lead	mg/kg	14	5	7	6	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	<1	<1	5	1
Zinc	mg/kg	23	2	2	13	2

Acid Extractable metals in soil						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-72
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP19_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	4	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	9	9	11	23
Copper	mg/kg	1	9	13	3	26
Lead	mg/kg	7	15	17	12	5
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	8	9	3	41
Zinc	mg/kg	7	23	26	9	35

Acid Extractable metals in soil						
Our Reference		252698-73	252698-74	252698-75	252698-76	252698-77
Your Reference	UNITS	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_0.1	S-02188.001-TP20_1.0
Depth		0.3	0.5	1.5	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	17	10	17	16
Copper	mg/kg	25	27	3	25	2
Lead	mg/kg	5	48	39	6	33
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	38	27	<1	34	1
Zinc	mg/kg	34	94	37	34	46

Acid Extractable metals in soil						
Our Reference		252698-78	252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-TP20_1.5	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		1.5	-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Arsenic	mg/kg	<4	25	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	9	6	8	8
Copper	mg/kg	<1	19	1	<1	2
Lead	mg/kg	1	78	5	5	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	13	<1	<1	3
Zinc	mg/kg	2	86	<1	2	10

Acid Extractable metals in soil		
Our Reference		252698-95
Your Reference	UNITS	S-02188.001-TP08_1.2 - [TRIPLICATE]
Depth		1.2
Date Sampled		1/10/2020
Type of sample		soil
Date prepared	-	08/10/2020
Date analysed	-	08/10/2020
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	7
Copper	mg/kg	4
Lead	mg/kg	27
Mercury	mg/kg	<0.1
Nickel	mg/kg	5
Zinc	mg/kg	16

Misc Inorg - Soil						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	7.9	8.3	9.1	8.3	8.4
Electrical Conductivity 1:5 soil:water	µS/cm	57	110	130	140	120

Misc Inorg - Soil						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.6	6.8	9.0	5.7	5.7
Electrical Conductivity 1:5 soil:water	µS/cm	49	65	97	24	40

Misc Inorg - Soil						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.1	6.4	6.0	7.3	5.1
Electrical Conductivity 1:5 soil:water	µS/cm	37	77	31	18	20

Misc Inorg - Soil						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	7.8	7.8	6.4	8.0	6.8
Electrical Conductivity 1:5 soil:water	µS/cm	200	150	67	54	29

Misc Inorg - Soil						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.4	6.0	8.4	7.9	7.9
Electrical Conductivity 1:5 soil:water	µS/cm	32	79	170	270	97

Misc Inorg - Soil						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.1	6.1	9.3	7.0	5.8
Electrical Conductivity 1:5 soil:water	µS/cm	29	72	120	66	65

Misc Inorg - Soil						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	7.5	7.6	6.2	8.8	6.2
Electrical Conductivity 1:5 soil:water	µS/cm	96	99	48	130	87

Misc Inorg - Soil						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.1	7.1	9.9	7.0	6.1
Electrical Conductivity 1:5 soil:water	µS/cm	85	41	150	100	69

Misc Inorg - Soil						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	9.7	8.5	5.8	5.5	9.5
Electrical Conductivity 1:5 soil:water	µS/cm	140	140	98	65	500

Misc Inorg - Soil						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	5.0	4.8	6.5	8.0	5.7
Electrical Conductivity 1:5 soil:water	µS/cm	41	33	41	250	28

Misc Inorg - Soil						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-76
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP20_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	5.0	7.7	7.8	4.7	9.0
Electrical Conductivity 1:5 soil:water	µS/cm	170	320	320	170	200

Misc Inorg - Soil			
Our Reference		252698-77	252698-78
Your Reference	UNITS	S-02188.001-TP20_1.0	S-02188.001-TP20_1.5
Depth		1	1.5
Date Sampled		1/10/2020	1/10/2020
Type of sample		soil	soil
Date prepared	-	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020
pH 1:5 soil:water	pH Units	6.0	6.4
Electrical Conductivity 1:5 soil:water	µS/cm	96	41

Moisture						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	8.8	15	8.3	14	14

Moisture						
Our Reference		252698-7	252698-8	252698-9	252698-10	252698-11
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP03_1.2	S-02188.001-TP04_0.3	S-02188.001-TP04_1.2	S-02188.001-TP05_0.1
Depth		1	1.2	0.3	1.2	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	15	17	11	14	9.3

Moisture						
Our Reference		252698-12	252698-13	252698-14	252698-18	252698-19
Your Reference	UNITS	S-02188.001-TP05_1.0	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-TP06_0.1	S-02188.001-TP06_1.0
Depth		1	1.4	2	0.1	1
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	16	21	16	13	16

Moisture						
Our Reference		252698-20	252698-21	252698-22	252698-24	252698-27
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_3.0	S-02188.001-TP08_0.2
Depth		0.1	1	1.3	3	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	13	9.1	24	14	8.9

Moisture						
Our Reference		252698-28	252698-29	252698-30	252698-32	252698-33
Your Reference	UNITS	S-02188.001-TP08_1.0	S-02188.001-TP08_1.2	S-02188.001-TP09_0.1	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2
Depth		1	1.2	0.1	1.5	0.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	14	18	12	19	7.5

Moisture						
Our Reference		252698-34	252698-35	252698-36	252698-37	252698-38
Your Reference	UNITS	S-02188.001-TP10_0.9	S-02188.001-TP10_1.0	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0	S-02188.001-TP11_1.2
Depth		0.9	1	0.1	1	1.2
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	8.9	26	8.6	8.5	23

Moisture						
Our Reference		252698-39	252698-40	252698-41	252698-42	252698-43
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP12_1.3	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0
Depth		0.2	1	1.3	0.3	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	8.9	10	18	5.9	12

Moisture						
Our Reference		252698-44	252698-47	252698-49	252698-50	252698-51
Your Reference	UNITS	S-02188.001-TP13_1.3	S-02188.001-BH02_4.0	S-02188.001-TP14_0.3	S-02188.001-TP14_1.0	S-02188.001-TP14_1.2
Depth		1.3	4	0.3	1	1.2
Date Sampled		1/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	26	13	11	12	17

Moisture						
Our Reference		252698-52	252698-53	252698-54	252698-57	252698-59
Your Reference	UNITS	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP15_1.4	S-02188.001-BH03_4.0	S-02188.001-TP16_0.1
Depth		0.1	1	1.4	4	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	5.9	9.1	27	16	8.8

Moisture						
Our Reference		252698-60	252698-61	252698-65	252698-66	252698-67
Your Reference	UNITS	S-02188.001-TP16_1.0	S-02188.001-TP16_1.2	S-02188.001-BH04_5.0	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5
Depth		1	1.2	5	0.1	0.5
Date Sampled		1/10/2020	1/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	19	16	16	7.5	9.7

Moisture						
Our Reference		252698-68	252698-69	252698-70	252698-71	252698-72
Your Reference	UNITS	S-02188.001-TP17_1.1	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP18_1.0	S-02188.001-TP19_0.1
Depth		1.1	0.1	0.5	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	20	6.4	8.1	17	5.0

Moisture						
Our Reference		252698-73	252698-74	252698-75	252698-76	252698-77
Your Reference	UNITS	S-02188.001-TP19_0.3	S-02188.001-TP19_0.5	S-02188.001-TP19_1.5	S-02188.001-TP20_0.1	S-02188.001-TP20_1.0
Depth		0.3	0.5	1.5	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	7.0	8.3	15	4.3	19

Moisture						
Our Reference		252698-78	252698-80	252698-81	252698-82	252698-83
Your Reference	UNITS	S-02188.001-TP20_1.5	S-02188.001-QA01	S-02188.001-QA03	S-02188.001-QA05	S-02188.001-QA07
Depth		1.5	-	-	-	-
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/10/2020	08/10/2020	08/10/2020	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Moisture	%	13	7.3	17	9.5	20

sPOCAS field test						
Our Reference		252698-8	252698-10	252698-13	252698-14	252698-15
Your Reference	UNITS	S-02188.001-TP03_1.2	S-02188.001-TP04_1.2	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-BH01_3.0
Depth		1.2	1.2	1.4	2	3
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	6.0	4.9	6.0	4.8	5.3
pH_{FOX} (field peroxide test)*	pH Units	4.9	3.1	3.8	4.4	3.4
Reaction Rate*	-	Low reaction	Medium reaction	Extreme reaction	High reaction	High reaction

sPOCAS field test						
Our Reference		252698-16	252698-17	252698-19	252698-22	252698-23
Your Reference	UNITS	S-02188.001-BH01_4.0	S-02188.001-BH01_5.0	S-02188.001-TP06_1.0	S-02188.001-TP07_1.3	S-02188.001-BH05_2.0
Depth		4	5	1	1.3	2
Date Sampled		2/10/2020	2/10/2020	1/10/2020	1/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	5.4	5.7	4.7	6.0	6.1
pH_{FOX} (field peroxide test)*	pH Units	3.7	4.7	3.5	3.4	4.5
Reaction Rate*	-	Medium reaction	Low reaction	Volcanic reaction	Extreme reaction	High reaction

sPOCAS field test						
Our Reference		252698-24	252698-25	252698-26	252698-29	252698-35
Your Reference	UNITS	S-02188.001-BH05_3.0	S-02188.001-BH05_4.0	S-02188.001-BH05_5.0	S-02188.001-TP08_1.2	S-02188.001-TP10_1.0
Depth		3	4	5	1.2	1
Date Sampled		2/10/2020	2/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	6.6	6.0	6.3	6.2	6.3
pH_{FOX} (field peroxide test)*	pH Units	5.5	5.1	5.7	2.9	2.6
Reaction Rate*	-	Medium reaction	Medium reaction	Low reaction	Extreme reaction	Volcanic reaction

sPOCAS field test						
Our Reference		252698-38	252698-41	252698-44	252698-45	252698-46
Your Reference	UNITS	S-02188.001-TP11_1.2	S-02188.001-TP12_1.3	S-02188.001-TP13_1.3	S-02188.001-BH02_2.0	S-02188.001-BH02_3.0
Depth		1.2	1.3	1.3	2	3
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	6.0	5.8	6.0	6.4	6.7
pH_{FOX} (field peroxide test)*	pH Units	3.3	3.5	3.9	3.7	5.5
Reaction Rate*	-	Extreme reaction	Extreme reaction	Volcanic reaction	Low reaction	Medium reaction

sPOCAS field test						
Our Reference		252698-47	252698-48	252698-51	252698-54	252698-55
Your Reference	UNITS	S-02188.001-BH02_4.0	S-02188.001-BH02_5.0	S-02188.001-TP14_1.2	S-02188.001-TP15_1.4	S-02188.001-BH03_2.0
Depth		4	5	1.2	1.4	2
Date Sampled		2/10/2020	2/10/2020	1/10/2020	1/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	6.1	6.2	6.3	6.0	6.2
pH_{FOX} (field peroxide test)*	pH Units	5.4	5.3	4.0	2.8	2.6
Reaction Rate*	-	Low reaction	Medium reaction	Extreme reaction	Volcanic reaction	High reaction

sPOCAS field test						
Our Reference		252698-56	252698-57	252698-58	252698-61	252698-62
Your Reference	UNITS	S-02188.001-BH03_3.0	S-02188.001-BH03_4.0	S-02188.001-BH03_5.0	S-02188.001-TP16_1.2	S-02188.001-BH04_2.0
Depth		3	4	5	1.2	2
Date Sampled		2/10/2020	2/10/2020	2/10/2020	1/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	6.0	5.3	5.5	4.5	5.1
pH_{FOX} (field peroxide test)*	pH Units	3.8	4.2	4.1	4.0	2.9
Reaction Rate*	-	Medium reaction	High reaction	Medium reaction	Extreme reaction	High reaction

sPOCAS field test						
Our Reference		252698-63	252698-64	252698-65	252698-68	252698-71
Your Reference	UNITS	S-02188.001-BH04_3.0	S-02188.001-BH04_4.0	S-02188.001-BH04_5.0	S-02188.001-TP17_1.1	S-02188.001-TP18_1.0
Depth		3	4	5	1.1	1
Date Sampled		2/10/2020	2/10/2020	2/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
Date analysed	-	02/10/2020	02/10/2020	02/10/2020	02/10/2020	02/10/2020
pH_F (field pH test)*	pH Units	5.5	5.8	6.2	5.0	6.3
pH_{FOX} (field peroxide test)*	pH Units	3.5	5.3	6.7	3.9	3.8
Reaction Rate*	-	Low reaction	High reaction	Medium reaction	Volcanic reaction	Extreme reaction

sPOCAS field test		
Our Reference		252698-78
Your Reference	UNITS	S-02188.001-TP20_1.5
Depth		1.5
Date Sampled		1/10/2020
Type of sample		soil
Date prepared	-	02/10/2020
Date analysed	-	02/10/2020
pH_F (field pH test)*	pH Units	6.1
pH_{FOX} (field peroxide test)*	pH Units	2.8
Reaction Rate*	-	Medium reaction

RTA276 ENM* Foreign Material						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	5,900	4,800	7,000	3,400	6,500
Foreign Material	%	<0.05	<0.05	<0.05	<0.05	<0.05

RTA276 ENM* Foreign Material						
Our Reference		252698-7	252698-9	252698-11	252698-12	252698-18
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP04_0.3	S-02188.001-TP05_0.1	S-02188.001-TP05_1.0	S-02188.001-TP06_0.1
Depth		1	0.3	0.1	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	5,600	6,600	5,500	4,200	5,600
Foreign Material	%	<0.05	<0.05	<0.05	<0.05	<0.05

RTA276 ENM* Foreign Material						
Our Reference		252698-20	252698-21	252698-27	252698-28	252698-30
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP08_0.2	S-02188.001-TP08_1.0	S-02188.001-TP09_0.1
Depth		0.1	1	0.2	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	3,800	4,400	4,000	5,200	5,200
Foreign Material	%	<0.05	<0.05	0.20	<0.05	0.17

RTA276 ENM* Foreign Material						
Our Reference		252698-32	252698-33	252698-34	252698-36	252698-37
Your Reference	UNITS	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2	S-02188.001-TP10_0.9	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0
Depth		1.5	0.2	0.9	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	3,200	4,600	3,600	3,000	3,000
Foreign Material	%	<0.05	<0.05	0.07	0.21	<0.05

RTA276 ENM* Foreign Material						
Our Reference		252698-39	252698-40	252698-42	252698-43	252698-49
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0	S-02188.001-TP14_0.3
Depth		0.2	1	0.3	1	0.3
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	2,400	2,700	2,200	2,400	2,500
Foreign Material	%	<0.05	<0.05	0.10	<0.05	0.14

RTA276 ENM* Foreign Material						
Our Reference		252698-50	252698-52	252698-53	252698-59	252698-60
Your Reference	UNITS	S-02188.001-TP14_1.0	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP16_0.1	S-02188.001-TP16_1.0
Depth		1	0.1	1	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	2,300	4,700	2,600	4,700	5,500
Foreign Material	%	<0.05	0.71	0.55	0.24	<0.05

RTA276 ENM* Foreign Material						
Our Reference		252698-66	252698-67	252698-69	252698-70	252698-76
Your Reference	UNITS	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP20_0.1
Depth		0.1	0.5	0.1	0.5	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Date analysed	-	09/10/2020	09/10/2020	09/10/2020	09/10/2020	09/10/2020
Sample Mass Tested	g	3,800	3,400	3,700	4,800	4,000
Foreign Material	%	<0.05	<0.05	<0.05	<0.05	<0.05

RTA276 ENM* Foreign Material		
Our Reference		252698-77
Your Reference	UNITS	S-02188.001-TP20_1.0
Depth		1
Date Sampled		1/10/2020
Type of sample		soil
Date prepared	-	09/10/2020
Date analysed	-	09/10/2020
Sample Mass Tested	g	6,600
Foreign Material	%	<0.05

Asbestos ID - soils						
Our Reference		252698-1	252698-2	252698-3	252698-5	252698-6
Your Reference	UNITS	S-02188.001-TP01_0.1	S-02188.001-TP01_1.0	S-02188.001-TP02_0.1	S-02188.001-TP02_0.9	S-02188.001-TP03_0.1
Depth		0.1	1	0.1	0.9	0.1
Date Sampled		1/10/2020	1/10/2020	01/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 25g	Approx. 35g	Approx. 50g	Approx. 35g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-7	252698-9	252698-11	252698-12	252698-18
Your Reference	UNITS	S-02188.001-TP03_1.0	S-02188.001-TP04_0.3	S-02188.001-TP05_0.1	S-02188.001-TP05_1.0	S-02188.001-TP06_0.1
Depth		1	0.3	0.1	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 40g	Approx. 40g	Approx. 35g	Approx. 45g	Approx. 50g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-20	252698-21	252698-27	252698-28	252698-30
Your Reference	UNITS	S-02188.001-TP07_0.1	S-02188.001-TP07_1.0	S-02188.001-TP08_0.2	S-02188.001-TP08_1.0	S-02188.001-TP09_0.1
Depth		0.1	1	0.2	1	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 40g	Approx. 40g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-32	252698-33	252698-34	252698-36	252698-37
Your Reference	UNITS	S-02188.001-TP09_1.5	S-02188.001-TP10_0.2	S-02188.001-TP10_0.9	S-02188.001-TP11_0.1	S-02188.001-TP11_1.0
Depth		1.5	0.2	0.9	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 40g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-39	252698-40	252698-42	252698-43	252698-49
Your Reference	UNITS	S-02188.001-TP12_0.2	S-02188.001-TP12_1.0	S-02188.001-TP13_0.3	S-02188.001-TP13_1.0	S-02188.001-TP14_0.3
Depth		0.2	1	0.3	1	0.3
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 40g	Approx. 50g	Approx. 45g	Approx. 45g	Approx. 40g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-50	252698-52	252698-53	252698-59	252698-60
Your Reference	UNITS	S-02188.001-TP14_1.0	S-02188.001-TP15_0.1	S-02188.001-TP15_1.0	S-02188.001-TP16_0.1	S-02188.001-TP16_1.0
Depth		1	0.1	1	0.1	1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 55g	Approx. 50g	Approx. 40g	Approx. 35g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		252698-66	252698-67	252698-69	252698-70	252698-76
Your Reference	UNITS	S-02188.001-TP17_0.1	S-02188.001-TP17_0.5	S-02188.001-TP18_0.1	S-02188.001-TP18_0.5	S-02188.001-TP20_0.1
Depth		0.1	0.5	0.1	0.5	0.1
Date Sampled		1/10/2020	1/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		252698-77
Your Reference	UNITS	S-02188.001-TP20_1.0
Depth		1
Date Sampled		1/10/2020
Type of sample		soil
Date analysed	-	12/10/2020
Sample mass tested	g	Approx. 30g
Sample Description	-	Brown clayey soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Asbestos ID - materials		
Our Reference		252698-79
Your Reference	UNITS	S-02188.001-AS001
Depth		0.5
Date Sampled		1/10/2020
Type of sample		material
Date analysed	-	08/10/2020
Mass / Dimension of Sample	-	100x80x5mm
Sample Description	-	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	[NT]

vTRH(C6-C10)/BTEXN in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	07/10/2020	07/10/2020
Date analysed	-	07/10/2020	07/10/2020
TRH C_6 - C_9	µg/L	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Naphthalene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	107	106
Surrogate toluene-d8	%	98	98
Surrogate 4-BFB	%	106	105

svTRH (C10-C40) in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	08/10/2020	08/10/2020
Date analysed	-	09/10/2020	09/10/2020
TRH C_{10} - C_{14}	µg/L	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100
Surrogate o-Terphenyl	%	82	77

PAHs in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020
Naphthalene	µg/L	<1	<1
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	85	91

Organochlorine Pesticides in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020
alpha-BHC	µg/L	<0.2	<0.2
HCB	µg/L	<0.2	<0.2
beta-BHC	µg/L	<0.2	<0.2
gamma-BHC	µg/L	<0.2	<0.2
Heptachlor	µg/L	<0.2	<0.2
delta-BHC	µg/L	<0.2	<0.2
Aldrin	µg/L	<0.2	<0.2
Heptachlor Epoxide	µg/L	<0.2	<0.2
gamma-Chlordane	µg/L	<0.2	<0.2
alpha-Chlordane	µg/L	<0.2	<0.2
Endosulfan I	µg/L	<0.2	<0.2
pp-DDE	µg/L	<0.2	<0.2
Dieldrin	µg/L	<0.2	<0.2
Endrin	µg/L	<0.2	<0.2
Endosulfan II	µg/L	<0.2	<0.2
pp-DDD	µg/L	<0.2	<0.2
Endrin Aldehyde	µg/L	<0.2	<0.2
pp-DDT	µg/L	<0.2	<0.2
Endosulfan Sulphate	µg/L	<0.2	<0.2
Methoxychlor	µg/L	<0.2	<0.2
Surrogate TCMX	%	76	81

OP Pesticides in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020
Dichlorvos	µg/L	<0.2	<0.2
Dimethoate	µg/L	<0.2	<0.2
Diazinon	µg/L	<0.2	<0.2
Chlorpyriphos-methyl	µg/L	<0.2	<0.2
Ronnel	µg/L	<0.2	<0.2
Fenitrothion	µg/L	<0.2	<0.2
Malathion	µg/L	<0.2	<0.2
Chlorpyriphos	µg/L	<0.2	<0.2
Parathion	µg/L	<0.2	<0.2
Bromophos ethyl	µg/L	<0.2	<0.2
Ethion	µg/L	<0.2	<0.2
Azinphos-methyl (Guthion)	µg/L	<0.2	<0.2
Surrogate TCMX	%	76	81

PCBs in Water			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date extracted	-	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020
Aroclor 1016	µg/L	<2	<2
Aroclor 1221	µg/L	<2	<2
Aroclor 1232	µg/L	<2	<2
Aroclor 1242	µg/L	<2	<2
Aroclor 1248	µg/L	<2	<2
Aroclor 1254	µg/L	<2	<2
Aroclor 1260	µg/L	<2	<2
Surrogate TCMX	%	76	81

Metals in Water - Dissolved			
Our Reference		252698-86	252698-87
Your Reference	UNITS	S-02188.001-RB01	S-02188.001-RB02
Depth		-	-
Date Sampled		1/10/2020	02/10/2020
Type of sample		soil	soil
Date digested	-	08/10/2020	08/10/2020
Date analysed	-	08/10/2020	08/10/2020
Arsenic - Dissolved	mg/L	<0.05	<0.05
Cadmium - Dissolved	mg/L	<0.01	<0.01
Chromium - Dissolved	mg/L	<0.01	<0.01
Copper - Dissolved	mg/L	<0.01	<0.01
Lead - Dissolved	mg/L	<0.03	<0.03
Mercury - Dissolved	mg/L	<0.0005	<0.0005
Nickel - Dissolved	mg/L	<0.02	<0.02
Zinc - Dissolved	mg/L	<0.02	<0.02

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-063	pH- measured using pH meter and electrode. Soil is oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions.
Inorg-080	This method is based on RTA T276 and as per NSW DECC Resource Recovery Exemption Guidelines. RTA T276 requires at least 6kg of sample for this test. Where foreign materials are found, more details may be available on the typesand/or quantities in the Comments section of the report.
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.

Method ID	Methodology Summary
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.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
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	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.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			09/10/2020	8	09/10/2020	09/10/2020		09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	8	<25	<25	0	105	85
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	8	<25	<25	0	105	85
Benzene	mg/kg	0.2	Org-023	<0.2	8	<0.2	<0.2	0	84	72
Toluene	mg/kg	0.5	Org-023	<0.5	8	<0.5	<0.5	0	123	94
Ethylbenzene	mg/kg	1	Org-023	<1	8	<1	<1	0	106	88
m+p-xylene	mg/kg	2	Org-023	<2	8	<2	<2	0	105	86
o-Xylene	mg/kg	1	Org-023	<1	8	<1	<1	0	106	85
naphthalene	mg/kg	1	Org-023	<1	8	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	126	8	94	94	0	126	101

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	09/10/2020	09/10/2020		09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	19	<25	<25	0	113	103
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	19	<25	<25	0	113	103
Benzene	mg/kg	0.2	Org-023	[NT]	19	<0.2	<0.2	0	104	90
Toluene	mg/kg	0.5	Org-023	[NT]	19	<0.5	<0.5	0	120	112
Ethylbenzene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	107	96
m+p-xylene	mg/kg	2	Org-023	[NT]	19	<2	<2	0	116	109
o-Xylene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	111	108
naphthalene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	19	122	117	4	124	120

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	09/10/2020	09/10/2020		09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	29	<25	<25	0	101	106
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	29	<25	<25	0	101	106
Benzene	mg/kg	0.2	Org-023	[NT]	29	<0.2	<0.2	0	87	95
Toluene	mg/kg	0.5	Org-023	[NT]	29	<0.5	<0.5	0	114	106
Ethylbenzene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	92	101
m+p-xylene	mg/kg	2	Org-023	[NT]	29	<2	<2	0	106	115
o-Xylene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	105	115
naphthalene	mg/kg	1	Org-023	[NT]	29	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	29	118	121	3	124	125

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		09/10/2020	09/10/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	51	<25	<25	0	106	105
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	51	<25	<25	0	106	105
Benzene	mg/kg	0.2	Org-023	[NT]	51	<0.2	<0.2	0	102	94
Toluene	mg/kg	0.5	Org-023	[NT]	51	<0.5	<0.5	0	104	110
Ethylbenzene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	107	98
m+p-xylene	mg/kg	2	Org-023	[NT]	51	<2	<2	0	108	112
o-Xylene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	108	112
naphthalene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	51	122	119	2	126	123

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	54	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	54	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	54	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	54	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	54	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	54	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	54	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	54	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	54	127	117	8	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	61	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	61	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	61	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	61	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	61	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	61	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	61	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	61	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	61	125	117	7	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	75	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	75	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	75	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	75	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	75	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	75	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	75	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	75	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	75	128	122	5	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	78	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	78	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	78	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	78	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	78	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	78	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	78	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	78	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	78	124	126	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	8	<50	<50	0	110	95
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	8	<100	<100	0	80	77
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	8	<100	<100	0	77	77
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	8	<50	<50	0	110	95
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	8	<100	<100	0	80	77
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	8	<100	<100	0	77	77
Surrogate o-Terphenyl	%		Org-020	94	8	85	83	2	95	84

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	19	<50	<50	0	115	105
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	19	<100	<100	0	88	82
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	19	<100	<100	0	92	105
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	19	<50	<50	0	115	105
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	19	<100	<100	0	88	82
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	19	<100	<100	0	92	105
Surrogate o-Terphenyl	%		Org-020	[NT]	19	87	87	0	98	89

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	29	<50	<50	0	115	104
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	84	87
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	68	74
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	29	<50	<50	0	115	104
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	84	87
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	29	<100	<100	0	68	74
Surrogate o-Terphenyl	%		Org-020	[NT]	29	87	86	1	99	95

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		08/10/2020	09/10/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	51	<50	<50	0	112	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	81	84
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	77	82
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	51	<50	<50	0	112	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	81	84
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	77	82
Surrogate o-Terphenyl	%		Org-020	[NT]	51	91	93	2	97	93

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	54	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	54	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	54	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	54	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	54	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	54	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	54	108	92	16	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	61	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	61	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	61	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	61	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	61	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	61	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	61	100	90	11	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	75	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	75	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	75	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	75	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	75	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	75	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	75	91	90	1	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	09/10/2020	09/10/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	78	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	78	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	78	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	78	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	78	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	78	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	78	93	87	7	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	90	94
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	91	92
Fluorene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	91	91
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	99	103
Anthracene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	96	104
Pyrene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	93	100
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	86	88
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	8	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	8	<0.05	<0.05	0	100	76
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	96	8	99	100	1	91	96

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	79	77
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	89	92
Fluorene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	88	89
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	101	101
Anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	100	102
Pyrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	98	100
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	86	88
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	19	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	19	<0.05	<0.05	0	78	78
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	19	96	95	1	96	100

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	84	92
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	108	91
Fluorene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	98	91
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	29	0.2	<0.1	67	102	93
Anthracene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	29	0.4	0.2	67	118	105
Pyrene	mg/kg	0.1	Org-022/025	[NT]	29	0.4	0.2	67	114	95
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	29	0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	29	0.1	<0.1	0	84	98
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	29	0.3	<0.2	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	29	0.1	0.07	35	100	97
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	29	0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	29	105	100	5	98	100

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		08/10/2020	08/10/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	88	88
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	98	87
Fluorene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	89	88
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	93	91
Anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	104	105
Pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	96	95
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	98	94
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	51	<0.05	<0.05	0	95	86
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	51	99	101	2	102	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	54	0.2	0.1	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	54	0.2	0.1	67	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	54	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	54	0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	54	108	104	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	61	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	61	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	61	101	98	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	75	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	75	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	75	101	100	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	78	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	78	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	78	100	105	5	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	94	101
HCB	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	87	92
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	81	73
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	95	106
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	95	101
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	85	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	91	99
Endrin	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	77	70
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	80	77
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	78	82
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	104	8	101	104	3	99	98

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	96	101
HCB	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	91	92
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	70	71
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	103	103
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	97	99
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	89	97
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	97	99
Endrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	82	73
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	70	86
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	76	84
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	102	102	0	103	99

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	112	64
HCB	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	98	79
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	84	79
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	116	92
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	106	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	104	91
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	102	91
Endrin	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	78	94
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	88	74
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	92	80
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	29	102	99	3	104	94

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		08/10/2020	08/10/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	77	92
HCB	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	83	79
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	83	69
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	94	90
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	95	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	87	92
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	93	97
Endrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	108	90
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	76	76
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	82	76
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	51	98	100	2	93	93

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	54	109	103	6	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	61	96	97	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	75	95	91	4	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	78	92	92	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	90	80
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	100	95
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	70	67
Malathion	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	80	102
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	92	97
Parathion	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	72	69
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	80	87
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	104	8	101	104	3	96	98

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	80	82
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	104	98
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	72	77
Malathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	84	118
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	96	101
Parathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	74	78
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	86	101
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	102	102	0	99	99

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	76	82
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	110	84
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	78	83
Malathion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	100	104
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	85	89
Parathion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	78	94
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	96	114
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	29	102	99	3	104	94

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		08/10/2020	08/10/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	94	76
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	86	88
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	100	89
Malathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	118	118
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	91	93
Parathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	94	75
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	91	120
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	51	98	100	2	93	93

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	54	109	103	6	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	61	96	97	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	75	95	91	4	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	78	92	92	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date extracted	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	100	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	8	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	104	8	101	104	3	99	98

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date extracted	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	99	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	19	102	102	0	103	99

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date extracted	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	100	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	29	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	29	102	99	3	104	94

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date extracted	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	09/10/2020	09/10/2020		08/10/2020	08/10/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	100	120
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	51	98	100	2	93	93

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	09/10/2020	09/10/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	54	109	103	6	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	61	96	97	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	75	95	91	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	78	92	92	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	252698-10
Date prepared	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	8	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Arsenic	mg/kg	4	Metals-020	<4	8	<4	<4	0	99	102
Cadmium	mg/kg	0.4	Metals-020	<0.4	8	<0.4	<0.4	0	91	93
Chromium	mg/kg	1	Metals-020	<1	8	7	7	0	94	99
Copper	mg/kg	1	Metals-020	<1	8	2	1	67	100	107
Lead	mg/kg	1	Metals-020	<1	8	11	9	20	97	103
Mercury	mg/kg	0.1	Metals-021	<0.1	8	<0.1	<0.1	0	108	110
Nickel	mg/kg	1	Metals-020	<1	8	3	2	40	100	103
Zinc	mg/kg	1	Metals-020	<1	8	5	3	50	97	100

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	252698-35
Date prepared	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	19	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Arsenic	mg/kg	4	Metals-020	[NT]	19	5	<4	22	102	82
Cadmium	mg/kg	0.4	Metals-020	[NT]	19	<0.4	<0.4	0	94	86
Chromium	mg/kg	1	Metals-020	[NT]	19	11	9	20	97	93
Copper	mg/kg	1	Metals-020	[NT]	19	5	4	22	101	114
Lead	mg/kg	1	Metals-020	[NT]	19	13	11	17	99	106
Mercury	mg/kg	0.1	Metals-021	[NT]	19	<0.1	<0.1	0	109	#
Nickel	mg/kg	1	Metals-020	[NT]	19	5	4	22	102	96
Zinc	mg/kg	1	Metals-020	[NT]	19	28	19	38	100	103

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	252698-65
Date prepared	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	29	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Arsenic	mg/kg	4	Metals-020	[NT]	29	<4	<4	0	112	83
Cadmium	mg/kg	0.4	Metals-020	[NT]	29	<0.4	<0.4	0	105	80
Chromium	mg/kg	1	Metals-020	[NT]	29	6	7	15	109	84
Copper	mg/kg	1	Metals-020	[NT]	29	2	8	120	112	90
Lead	mg/kg	1	Metals-020	[NT]	29	8	54	148	112	88
Mercury	mg/kg	0.1	Metals-021	[NT]	29	<0.1	0.2	67	105	91
Nickel	mg/kg	1	Metals-020	[NT]	29	4	4	0	114	86
Zinc	mg/kg	1	Metals-020	[NT]	29	7	32	128	113	86

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	252698-83
Date prepared	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			[NT]	51	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Arsenic	mg/kg	4	Metals-020	[NT]	51	5	4	22	101	93
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	94	84
Chromium	mg/kg	1	Metals-020	[NT]	51	7	8	13	97	90
Copper	mg/kg	1	Metals-020	[NT]	51	5	6	18	99	99
Lead	mg/kg	1	Metals-020	[NT]	51	15	18	18	100	92
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	105	101
Nickel	mg/kg	1	Metals-020	[NT]	51	4	4	0	101	93
Zinc	mg/kg	1	Metals-020	[NT]	51	35	36	3	102	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	54	08/10/2020	08/10/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	54	6	6	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	54	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	54	9	9	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	54	7	6	15	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	54	16	16	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	54	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	54	6	7	15	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	54	110	120	9	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	61	08/10/2020	08/10/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	61	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	61	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	61	6	5	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	61	6	5	18	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	61	5	5	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	61	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	61	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	61	2	2	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	75	08/10/2020	08/10/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	75	4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	75	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	75	10	10	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	75	3	3	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	75	39	55	34	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	75	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	75	<1	1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	75	37	36	3	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Date analysed	-			[NT]	78	08/10/2020	08/10/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	78	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	78	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	78	<1	1	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	78	<1	<1	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	78	1	2	67	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	78	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	78	<1	<1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	78	2	5	86	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			09/10/2020	1	09/10/2020	09/10/2020		09/10/2020	[NT]
Date analysed	-			09/10/2020	1	09/10/2020	09/10/2020		09/10/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	1	7.9	7.9	0	100	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	1	57	55	4	100	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	[NT]
Date prepared	-			[NT]	12	09/10/2020	09/10/2020		09/10/2020	[NT]
Date analysed	-			[NT]	12	09/10/2020	09/10/2020		09/10/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	12	6.1	6.1	0	99	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	12	37	40	8	100	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date prepared	-			[NT]	28	09/10/2020	09/10/2020		09/10/2020	[NT]
Date analysed	-			[NT]	28	09/10/2020	09/10/2020		09/10/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	28	6.4	6.4	0	100	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	28	32	31	3	105	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	[NT]
Date prepared	-			[NT]	39	09/10/2020	09/10/2020		09/10/2020	[NT]
Date analysed	-			[NT]	39	09/10/2020	09/10/2020		09/10/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	39	7.5	7.6	1	100	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	39	96	91	5	104	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	52	09/10/2020	09/10/2020		[NT]	[NT]
Date analysed	-			[NT]	52	09/10/2020	09/10/2020		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	52	9.7	9.4	3	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	52	140	120	15	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	68	09/10/2020	09/10/2020		[NT]	[NT]
Date analysed	-			[NT]	68	09/10/2020	09/10/2020		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	68	5.0	5.0	0	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	68	170	180	6	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/10/2020	[NT]	[NT]	[NT]	[NT]	07/10/2020	[NT]
Date analysed	-			07/10/2020	[NT]	[NT]	[NT]	[NT]	07/10/2020	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	103	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	105	[NT]	[NT]	[NT]	[NT]	75	[NT]
Surrogate toluene-d8	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	75	[NT]
Surrogate 4-BFB	%		Org-023	108	[NT]	[NT]	[NT]	[NT]	86	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
Date analysed	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	79	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	70	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	79	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	70	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
Surrogate o-Terphenyl	%		Org-020	70	[NT]	[NT]	[NT]	[NT]	127	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
Date analysed	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
Naphthalene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Acenaphthylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Fluorene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Phenanthrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	83	[NT]
Pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Benzo(a)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Benzo(b,j+k)fluoranthene	µg/L	2	Org-022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	75	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	101	[NT]	[NT]	[NT]	[NT]	81	[NT]

QUALITY CONTROL: Organochlorine Pesticides in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	252698-87
Date extracted	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
alpha-BHC	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	81	120
HCB	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
beta-BHC	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	80	108
gamma-BHC	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Heptachlor	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	74	97
delta-BHC	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Aldrin	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	93	134
Heptachlor Epoxide	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	87	119
gamma-Chlordane	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
alpha-Chlordane	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Endosulfan I	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
pp-DDE	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	81	116
Dieldrin	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	86	92
Endrin	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	70	81
Endosulfan II	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
pp-DDD	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	74	107
Endrin Aldehyde	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
pp-DDT	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	79	97
Methoxychlor	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	83	86	76	110	37	74	104

QUALITY CONTROL: OP Pesticides in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	252698-87
Date extracted	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Dichlorvos	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	82	105
Dimethoate	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Diazinon	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Ronnel	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	77	120
Fenitrothion	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	78	84
Malathion	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	88	120
Chlorpyriphos	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	85	115
Parathion	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	70	91
Bromophos ethyl	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Ethion	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	80	109
Azinphos-methyl (Guthion)	µg/L	0.2	Org-022/025	<0.2	86	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	83	86	76	110	37	74	104

QUALITY CONTROL: PCBs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	252698-87
Date extracted	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Date analysed	-			08/10/2020	86	08/10/2020	08/10/2020		08/10/2020	08/10/2020
Aroclor 1016	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-021	<2	86	<2	<2	0	100	115
Aroclor 1260	µg/L	2	Org-021	<2	86	<2	<2	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	83	86	76	110	37	74	114

QUALITY CONTROL: Metals in Water - Dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date digested	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
Date analysed	-			08/10/2020	[NT]	[NT]	[NT]	[NT]	08/10/2020	[NT]
Arsenic - Dissolved	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	115	[NT]
Cadmium - Dissolved	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
Chromium - Dissolved	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	109	[NT]
Copper - Dissolved	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
Lead - Dissolved	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	114	[NT]
Mercury - Dissolved	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	113	[NT]
Nickel - Dissolved	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	115	[NT]
Zinc - Dissolved	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	116	[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

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 252698-29 for Cu, Pb & Zn. Therefore a triplicate result has been issued as laboratory sample number 252698-95.
-# High spike recovery was obtained for this sample. Sample matrix interference is suspected. However, an acceptable recovery was obtained for the LCS

FOREIGN MATERIAL IS DETERMINED
#27,34,36,42,49,52,53,59:BITUMEN/ASPHALT
#30:RUBBER

Asbestos: A portion of the supplied samples were sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples requested for asbestos testing were sub-sampled from jars provided by the client.

Ming To

From: Lochlan Browne <Lochlan.Browne@edp-au.com>
Sent: Tuesday, 20 October 2020 5:08 PM
To: Ken Nguyen; Samplereceipt
Cc: Ryan Jacka; Matthew Konza
Subject: RE: Results for Registration 252698 S-02188.001

Ref: 252698-A
TAT: Standard
Due: 27/10/2020 MT.

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Ken,

Could I please schedule in Chromium Reducible Sulfur Suite testing for the following samples on standard TAT:

- 252698-8 / S-02188.001-TP03_1.2
- 252698-10 / S-02188.001-TP04_1.2
- 252698-13 / S-02188.001-TP05_1.4
- 252698-14 / S-02188.001-BH01_2.0
- 252698-15 / S-02188.001-BH01_3.0
- 252698-16 / S-02188.001-BH01_4.0
- 252698-17 / S-02188.001-BH01_5.0
- 252698-19 / S-02188.001-TP06_1.0
- 252698-23 / S-02188.001-BH05_2.0
- 252698-24 / S-02188.001-BH05_3.0
- 252698-25 / S-02188.001-BH05_4.0
- 252698-26 / S-02188.001-BH05-5.0
- 252698-32 / S-02188.001-TP09_1.5
- 252698-35 / S-02188.001-TP10_1.0
- 252698-54 / S-02188.001-TP15_1.4
- 252698-55 / S-02188.001-BH03_2.0
- 252698-56 / S-02188.001-BH03_3.0
- 252698-57 / S-02188.001-BH03_4.0
- 252698-58 / S-02188.001-BH03_5.0
- 252698-63 / S-02188.001-BH04_3.0
- 252698-64 / S-02188.001-BH04_4.0
- 252698-71 / S-02188.001-TP18_1.0

Any problems please let me know.

Thanks,

Lochlan Browne
HSE Consultant

M: +61 432 226 858 | **P:** +61 2 8484 5810
E: lochlan.browne@edp-au.com | Connect on LinkedIn
Our Office: Suite 101, 52 Atchison Street,
St Leonards, NSW 2065, Australia

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customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne

Sample Login Details

Your reference	S-02188.001
Envirolab Reference	252698-A
Date Sample Received	02/10/2020
Date Instructions Received	27/10/2020
Date Results Expected to be Reported	27/10/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	93 soil, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
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:

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Sample ID	Chromium Suite	On Hold
S-02188.001-TP01_0.1-0.1		✓
S-02188.001-TP01_1.0-1		✓
S-02188.001-TP02_0.1-0.1		✓
S-02188.001-TP02_0.5-0.5		✓
S-02188.001-TP02_0.9-0.9		✓
S-02188.001-TP03_0.1-0.1		✓
S-02188.001-TP03_1.0-1		✓
S-02188.001-TP03_1.2-1.2	✓	
S-02188.001-TP04_0.3-0.3		✓
S-02188.001-TP04_1.2-1.2	✓	
S-02188.001-TP05_0.1-0.1		✓
S-02188.001-TP05_1.0-1		✓
S-02188.001-TP05_1.4-1.4	✓	
S-02188.001-BH01_2.0-2	✓	
S-02188.001-BH01_3.0-3	✓	
S-02188.001-BH01_4.0-4	✓	
S-02188.001-BH01_5.0-5	✓	
S-02188.001-TP06_0.1-0.1		✓
S-02188.001-TP06_1.0-1	✓	
S-02188.001-TP07_0.1-0.1		✓
S-02188.001-TP07_1.0-1		✓
S-02188.001-TP07_1.3-1.3		✓
S-02188.001-BH05_2.0-2	✓	
S-02188.001-BH05_3.0-3	✓	
S-02188.001-BH05_4.0-4	✓	
S-02188.001-BH05_5.0-5	✓	
S-02188.001-TP08_0.2-0.2		✓
S-02188.001-TP08_1.0-1		✓
S-02188.001-TP08_1.2-1.2		✓
S-02188.001-TP09_0.1-0.1		✓
S-02188.001-TP09_1.0-1		✓
S-02188.001-TP09_1.5-1.5	✓	

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Sample ID	Chromium Suite	On Hold
S-02188.001-TP10_0.2-0.2		✓
S-02188.001-TP10_0.9-0.9		✓
S-02188.001-TP10_1.0-1	✓	
S-02188.001-TP11_0.1-0.1		✓
S-02188.001-TP11_1.0-1		✓
S-02188.001-TP11_1.2-1.2		✓
S-02188.001-TP12_0.2-0.2		✓
S-02188.001-TP12_1.0-1		✓
S-02188.001-TP12_1.3-1.3		✓
S-02188.001-TP13_0.3-0.3		✓
S-02188.001-TP13_1.0-1		✓
S-02188.001-TP13_1.3-1.3		✓
S-02188.001-BH02_2.0-2		✓
S-02188.001-BH02_3.0-3		✓
S-02188.001-BH02_4.0-4		✓
S-02188.001-BH02_5.0-5		✓
S-02188.001-TP14_0.3-0.3		✓
S-02188.001-TP14_1.0-1		✓
S-02188.001-TP14_1.2-1.2		✓
S-02188.001-TP15_0.1-0.1		✓
S-02188.001-TP15_1.0-1		✓
S-02188.001-TP15_1.4-1.4	✓	
S-02188.001-BH03_2.0-2	✓	
S-02188.001-BH03_3.0-3	✓	
S-02188.001-BH03_4.0-4	✓	
S-02188.001-BH03_5.0-5	✓	
S-02188.001-TP16_0.1-0.1		✓
S-02188.001-TP16_1.0-1		✓
S-02188.001-TP16_1.2-1.2		✓
S-02188.001-BH04_2.0-2		✓
S-02188.001-BH04_3.0-3	✓	
S-02188.001-BH04_4.0-4	✓	

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Sample ID	Chromium Suite	On Hold
S-02188.001-BH04_5.0-5		✓
S-02188.001-TP17_0.1-0.1		✓
S-02188.001-TP17_0.5-0.5		✓
S-02188.001-TP17_1.1-1.1		✓
S-02188.001-TP18_0.1-0.1		✓
S-02188.001-TP18_0.5-0.5		✓
S-02188.001-TP18_1.0-1	✓	
S-02188.001-TP19_0.1-0.1		✓
S-02188.001-TP19_0.3-0.3		✓
S-02188.001-TP19_0.5-0.5		✓
S-02188.001-TP19_1.5-1.5		✓
S-02188.001-TP20_0.1-0.1		✓
S-02188.001-TP20_1.0-1		✓
S-02188.001-TP20_1.5-1.5		✓
S-02188.001-AS001-0.5		✓
S-02188.001-QA01		✓
S-02188.001-QA03		✓
S-02188.001-QA05		✓
S-02188.001-QA07		✓
S-02188.001-QA09		✓
S-02188.001-QA10		✓
S-02188.001-RB01		✓
S-02188.001-RB02		✓
S-02188.001-TB01		✓
S-02188.001-TB02		✓
S-02188.001-TS01		✓
S-02188.001-TS02		✓
S-02188.001-TP04_1.0-1.0		✓
S-02188.001-TP14_0.3-0.3		✓
S-02188.001-TP14_1.0-1.0		✓
S-02188.001-TP08_1.2 - [TRIPLICATE]-1.2		✓

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

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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.

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CERTIFICATE OF ANALYSIS 252698-A

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne
Address	Suite 6/52 Atchison St, ST LEONARDS, NSW

Sample Details

Your Reference	**S-02188.001**
Number of Samples	93 soil, 1 material
Date samples received	02/10/2020
Date completed instructions received	27/10/2020

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	27/10/2020
Date of Issue	27/10/2020

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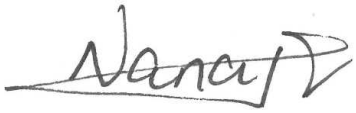
Results Approved By
Priya Samarawickrama, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

Chromium Suite						
Our Reference		252698-A-8	252698-A-10	252698-A-13	252698-A-14	252698-A-15
Your Reference	UNITS	S-02188.001-TP03_1.2	S-02188.001-TP04_1.2	S-02188.001-TP05_1.4	S-02188.001-BH01_2.0	S-02188.001-BH01_3.0
Depth		1.2	1.2	1.4	2	3
Date Sampled		1/10/2020	1/10/2020	1/10/2020	2/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
Date analysed	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
pH $_{kcl}$	pH units	5.8	4.5	5.6	4.1	4.1
s-TAA pH 6.5	%w/w S	<0.01	0.02	<0.01	0.06	0.05
TAA pH 6.5	moles H^+ /t	<5	11	6	34	34
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	0.009	<0.005	0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	5	<3	3
S_{HCl}	%w/w S	NA	<0.005	NA	0.009	0.013
S_{KCl}	%w/w S	0.005	<0.005	<0.005	0.006	0.008
S_{NAS}	%w/w S	NA	<0.005	NA	<0.005	<0.005
ANC_{BT}	% $CaCO_3$	NA	NA	NA	NA	NA
s-ANC_{BT}	%w/w S	NA	NA	NA	NA	NA
s-Net Acidity	%w/w S	0.012	0.022	0.018	0.061	0.063
a-Net Acidity	moles H^+ /t	7.2	14	11	38	39
Liming rate	kg $CaCO_3$ /t	<0.75	1	0.8	3	3
a-Net Acidity without ANCE	moles H^+ /t	7.2	14	11	38	39
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	1.0	0.82	2.9	3.0
s-Net Acidity without ANCE	%w/w S	0.012	0.022	0.018	0.061	0.063

Chromium Suite						
Our Reference		252698-A-16	252698-A-17	252698-A-19	252698-A-23	252698-A-24
Your Reference	UNITS	S-02188.001-BH01_4.0	S-02188.001-BH01_5.0	S-02188.001-TP06_1.0	S-02188.001-BH05_2.0	S-02188.001-BH05_3.0
Depth		4	5	1	2	3
Date Sampled		2/10/2020	2/10/2020	1/10/2020	2/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
Date analysed	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
pH $_{kcl}$	pH units	4.5	4.8	4.0	5.8	5.8
s-TAA pH 6.5	%w/w S	0.02	<0.01	0.08	<0.01	<0.01
TAA pH 6.5	moles H^+ /t	14	<5	49	<5	<5
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	0.005	<0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	<3	<3	<3
S_{HCl}	%w/w S	NA	NA	0.016	NA	NA
S_{KCl}	%w/w S	0.007	0.007	0.006	0.005	<0.005
S_{NAS}	%w/w S	NA	NA	0.010	NA	NA
ANC_{BT}	% $CaCO_3$	NA	NA	NA	NA	NA
s-ANC_{BT}	%w/w S	NA	NA	NA	NA	NA
s-Net Acidity	%w/w S	0.024	0.0080	0.093	0.0090	0.0060
a-Net Acidity	moles H^+ /t	15	5.2	58	5.7	<5
Liming rate	kg $CaCO_3$ /t	1	<0.75	4	<0.75	<0.75
a-Net Acidity without ANCE	moles H^+ /t	15	5.2	58	5.7	<5
Liming rate without ANCE	kg $CaCO_3$ /t	1.1	<0.75	4.3	<0.75	<0.75
s-Net Acidity without ANCE	%w/w S	0.024	0.0080	0.093	0.0090	0.0060

Chromium Suite						
Our Reference		252698-A-25	252698-A-26	252698-A-32	252698-A-35	252698-A-54
Your Reference	UNITS	S-02188.001-BH05_4.0	S-02188.001-BH05_5.0	S-02188.001-TP09_1.5	S-02188.001-TP10_1.0	S-02188.001-TP15_1.4
Depth		4	5	1.5	1	1.4
Date Sampled		2/10/2020	2/10/2020	1/10/2020	1/10/2020	1/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
Date analysed	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
pH $_{kcl}$	pH units	5.2	6.0	8.3	4.8	4.7
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	0.03	0.03
TAA pH 6.5	moles H^+ /t	<5	<5	<5	17	20
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	0.005	0.02	0.03
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	<3	12	16
S_{HCl}	%w/w S	NA	NA	NA	NA	NA
S_{KCl}	%w/w S	<0.005	<0.005	0.015	0.007	0.008
S_{NAS}	%w/w S	NA	NA	NA	NA	NA
ANC_{BT}	% $CaCO_3$	NA	NA	1.1	NA	NA
s-ANC_{BT}	%w/w S	NA	NA	0.35	NA	NA
s-Net Acidity	%w/w S	0.0060	<0.005	<0.005	0.046	0.059
a-Net Acidity	moles H^+ /t	<5	<5	<5	28	37
Liming rate	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	2	3
a-Net Acidity without ANCE	moles H^+ /t	<5	<5	<5	28	37
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	2.1	2.8
s-Net Acidity without ANCE	%w/w S	0.0060	<0.005	0.0050	0.046	0.059

Chromium Suite						
Our Reference		252698-A-55	252698-A-56	252698-A-57	252698-A-58	252698-A-63
Your Reference	UNITS	S-02188.001-BH03_2.0	S-02188.001-BH03_3.0	S-02188.001-BH03_4.0	S-02188.001-BH03_5.0	S-02188.001-BH04_3.0
Depth		2	3	4	5	3
Date Sampled		2/10/2020	2/10/2020	2/10/2020	2/10/2020	2/10/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
Date analysed	-	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
pH $_{kcl}$	pH units	4.3	4.0	4.1	4.1	3.9
s-TAA pH 6.5	%w/w S	0.03	0.07	0.06	0.08	0.13
TAA pH 6.5	moles H^+ /t	18	42	39	46	80
Chromium Reducible Sulfur	%w/w	0.01	0.006	0.009	0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	6	3	5	3	<3
S_{HCl}	%w/w S	0.008	0.012	0.016	0.020	0.017
S_{KCl}	%w/w S	0.006	0.008	0.009	0.011	0.011
S_{NAS}	%w/w S	<0.005	<0.005	0.008	0.009	0.006
ANC_{BT}	% $CaCO_3$	NA	NA	NA	NA	NA
s-ANC_{BT}	%w/w S	NA	NA	NA	NA	NA
s-Net Acidity	%w/w S	0.040	0.077	0.078	0.089	0.14
a-Net Acidity	moles H^+ /t	25	48	49	56	86
Liming rate	kg $CaCO_3$ /t	2	4	4	4	6
a-Net Acidity without ANCE	moles H^+ /t	25	48	49	56	86
Liming rate without ANCE	kg $CaCO_3$ /t	1.9	3.6	3.7	4.2	6.5
s-Net Acidity without ANCE	%w/w S	0.040	0.077	0.078	0.089	0.14

Chromium Suite			
Our Reference		252698-A-64	252698-A-71
Your Reference	UNITS	S-02188.001-BH04_4.0	S-02188.001-TP18_1.0
Depth		4	1
Date Sampled		2/10/2020	1/10/2020
Type of sample		soil	soil
Date prepared	-	26/10/2020	26/10/2020
Date analysed	-	26/10/2020	26/10/2020
pH_{kcl}	pH units	4.7	4.3
s-TAA pH 6.5	%w/w S	0.02	0.06
TAA pH 6.5	moles H^+ /t	12	39
Chromium Reducible Sulfur	%w/w	<0.005	0.01
a-Chromium Reducible Sulfur	moles H^+ /t	<3	7
S_{HCl}	%w/w S	NA	0.013
S_{KCl}	%w/w S	0.005	<0.005
S_{NAS}	%w/w S	NA	0.009
ANC_{BT}	% $CaCO_3$	NA	NA
s-ANC_{BT}	%w/w S	NA	NA
s-Net Acidity	%w/w S	0.023	0.083
a-Net Acidity	moles H^+ /t	14	52
Liming rate	kg $CaCO_3$ /t	1	4
a-Net Acidity without ANCE	moles H^+ /t	14	52
Liming rate without ANCE	kg $CaCO_3$ /t	1.1	3.9
s-Net Acidity without ANCE	%w/w S	0.023	0.083

Method ID	Methodology Summary
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			26/10/2020	8	26/10/2020	26/10/2020		26/10/2020	[NT]
Date analysed	-			26/10/2020	8	26/10/2020	26/10/2020		26/10/2020	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	8	5.8	5.8	0	100	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	8	<0.01	<0.01	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	8	<5	<5	0	105	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	8	<0.005	<0.005	0	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	8	<3	<3	0	112	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	8	NA	NA		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	8	0.005	<0.005	0	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	8	NA	NA		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	8	NA	NA		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	8	NA	NA		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	8	0.012	0.0080	40	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	8	7.2	5.2	32	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	8	<0.75	<0.75	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	8	7.2	5.2	32	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	8	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	8	0.012	0.0080	40	[NT]	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			[NT]	26	26/10/2020	26/10/2020		26/10/2020	[NT]
Date analysed	-			[NT]	26	26/10/2020	26/10/2020		26/10/2020	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	26	6.0	6.0	0	99	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	[NT]	26	<0.01	<0.01	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	[NT]	26	<5	<5	0	95	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	[NT]	26	<0.005	<0.005	0	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	[NT]	26	<3	<3	0	112	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	[NT]	26	NA	NA		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	[NT]	26	<0.005	<0.005	0	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	[NT]	26	NA	NA		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	[NT]	26	NA	NA		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	[NT]	26	NA	NA		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	[NT]	26	<0.005	0.0050	0	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	[NT]	26	<5	<5	0	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	[NT]	26	<0.75	<0.75	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	[NT]	26	<5	<5	0	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	[NT]	26	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	[NT]	26	<0.005	0.0050	0	[NT]	[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.

Ming To

From: Lochlan Browne <Lochlan.Browne@edp-au.com>
Sent: Monday, 26 October 2020 4:33 PM
To: Ken Nguyen; Samplereceipt
Subject: RE: Results for Registration 252698 S-02188.001

Ref: 252698-B
TAT: Standard
Due: 02/11/2020 MZ

Hi Ken,

Could I please schedule in TCLP testing for the following samples on standard TAT:

- 252698-3 / S-02188.001-TP02_0.1 (nickel)
- 252698-6 / S-02188.001-TP03_0.1 (PAH)

Any problems please let me know.

Thanks,

Lochlan Browne
HSE Consultant

M: +61 432 226 858 | **P:** +61 2 8484 5810
E: lochlan.browne@edp-au.com | Connect on LinkedIn
Our Office: Suite 101, 52 Atchison Street,
St Leonards, NSW 2065, Australia

From: Ken Nguyen <KNguyen@envirolab.com.au>
Sent: Monday, 12 October 2020 4:54 PM
To: Lochlan Browne <Lochlan.Browne@edp-au.com>; Ryan Jacka <Ryan.Jacka@edp-au.com>; Matthew Konza <Matthew.Konza@edp-au.com>
Subject: Results for Registration 252698 S-02188.001

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
an Excel or .csv file containing the results
a copy of the Invoice

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	EDP Consultants Pty Ltd
Attention	Ryan Jacka

Sample Login Details

Your reference	S-02188.001
Envirolab Reference	252698-B
Date Sample Received	02/10/2020
Date Instructions Received	26/10/2020
Date Results Expected to be Reported	02/11/2020

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	93 soil, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance - PAH

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoice accordingly.

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	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP01_0.1-0.1																				✓
S-02188.001-TP01_1.0-1																				✓
S-02188.001-TP02_0.1-0.1	✓																		✓	
S-02188.001-TP02_0.5-0.5																				✓
S-02188.001-TP02_0.9-0.9																				✓
S-02188.001-TP03_0.1-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
S-02188.001-TP03_1.0-1																				✓
S-02188.001-TP03_1.2-1.2																				✓
S-02188.001-TP04_0.3-0.3																				✓
S-02188.001-TP04_1.2-1.2																				✓
S-02188.001-TP05_0.1-0.1																				✓
S-02188.001-TP05_1.0-1																				✓
S-02188.001-TP05_1.4-1.4																				✓
S-02188.001-BH01_2.0-2																				✓
S-02188.001-BH01_3.0-3																				✓
S-02188.001-BH01_4.0-4																				✓
S-02188.001-BH01_5.0-5																				✓
S-02188.001-TP06_0.1-0.1																				✓
S-02188.001-TP06_1.0-1																				✓
S-02188.001-TP07_0.1-0.1																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP07_1.0-1																				✓
S-02188.001-TP07_1.3-1.3																				✓
S-02188.001-BH05_2.0-2																				✓
S-02188.001-BH05_3.0-3																				✓
S-02188.001-BH05_4.0-4																				✓
S-02188.001-BH05_5.0-5																				✓
S-02188.001-TP08_0.2-0.2																				✓
S-02188.001-TP08_1.0-1																				✓
S-02188.001-TP08_1.2-1.2																				✓
S-02188.001-TP09_0.1-0.1																				✓
S-02188.001-TP09_1.0-1																				✓
S-02188.001-TP09_1.5-1.5																				✓
S-02188.001-TP10_0.2-0.2																				✓
S-02188.001-TP10_0.9-0.9																				✓
S-02188.001-TP10_1.0-1																				✓
S-02188.001-TP11_0.1-0.1																				✓
S-02188.001-TP11_1.0-1																				✓
S-02188.001-TP11_1.2-1.2																				✓
S-02188.001-TP12_0.2-0.2																				✓
S-02188.001-TP12_1.0-1																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP12_1.3-1.3																				✓
S-02188.001-TP13_0.3-0.3																				✓
S-02188.001-TP13_1.0-1																				✓
S-02188.001-TP13_1.3-1.3																				✓
S-02188.001-BH02_2.0-2																				✓
S-02188.001-BH02_3.0-3																				✓
S-02188.001-BH02_4.0-4																				✓
S-02188.001-BH02_5.0-5																				✓
S-02188.001-TP14_0.3-0.3																				✓
S-02188.001-TP14_1.0-1																				✓
S-02188.001-TP14_1.2-1.2																				✓
S-02188.001-TP15_0.1-0.1																				✓
S-02188.001-TP15_1.0-1																				✓
S-02188.001-TP15_1.4-1.4																				✓
S-02188.001-BH03_2.0-2																				✓
S-02188.001-BH03_3.0-3																				✓
S-02188.001-BH03_4.0-4																				✓
S-02188.001-BH03_5.0-5																				✓
S-02188.001-TP16_0.1-0.1																				✓
S-02188.001-TP16_1.0-1																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP16_1.2-1.2																				✓
S-02188.001-BH04_2.0-2																				✓
S-02188.001-BH04_3.0-3																				✓
S-02188.001-BH04_4.0-4																				✓
S-02188.001-BH04_5.0-5																				✓
S-02188.001-TP17_0.1-0.1																				✓
S-02188.001-TP17_0.5-0.5																				✓
S-02188.001-TP17_1.1-1.1																				✓
S-02188.001-TP18_0.1-0.1																				✓
S-02188.001-TP18_0.5-0.5																				✓
S-02188.001-TP18_1.0-1																				✓
S-02188.001-TP19_0.1-0.1																				✓
S-02188.001-TP19_0.3-0.3																				✓
S-02188.001-TP19_0.5-0.5																				✓
S-02188.001-TP19_1.5-1.5																				✓
S-02188.001-TP20_0.1-0.1																				✓
S-02188.001-TP20_1.0-1																				✓
S-02188.001-TP20_1.5-1.5																				✓
S-02188.001-AS001-0.5																				✓
S-02188.001-QA01																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-QA03																				✓
S-02188.001-QA05																				✓
S-02188.001-QA07																				✓
S-02188.001-QA09																				✓
S-02188.001-QA10																				✓
S-02188.001-RB01																				✓
S-02188.001-RB02																				✓
S-02188.001-TB01																				✓
S-02188.001-TB02																				✓
S-02188.001-TS01																				✓
S-02188.001-TS02																				✓
S-02188.001-TP04_1.0-1.0																				✓
S-02188.001-TP14_0.3-0.3																				✓
S-02188.001-TP14_1.0-1.0																				✓
S-02188.001-TP08_1.2 - [TRIPLICATE]-1.2																				✓

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

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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.

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CERTIFICATE OF ANALYSIS 252698-B

Client Details

Client	EDP Consultants Pty Ltd
Attention	Ryan Jacka
Address	Suite 6/52 Atchison St, ST LEONARDS, NSW

Sample Details

Your Reference	**S-02188.001**
Number of Samples	93 soil, 1 material
Date samples received	02/10/2020
Date completed instructions received	26/10/2020

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	02/11/2020
Date of Issue	02/11/2020

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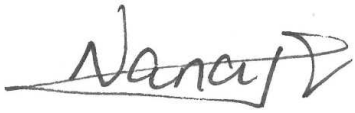
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Dragana Tomas, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid			
Our Reference		252698-B-3	252698-B-6
Your Reference	UNITS	S-02188.001-TP02_0.1	S-02188.001-TP03_0.1
Depth		0.1	0.1
Date Sampled		01/10/2020	1/10/2020
Type of sample		soil	soil
pH of soil for fluid# determ.	pH units	9.6	9.4
pH of soil TCLP (after HCl)	pH units	1.9	1.9
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.1	5.1

PAHs in TCLP (USEPA 1311)		
Our Reference		252698-B-6
Your Reference	UNITS	S-02188.001-TP03_0.1
Depth		0.1
Date Sampled		1/10/2020
Type of sample		soil
Date extracted	-	28/10/2020
Date analysed	-	28/10/2020
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	94

Metals in TCLP USEPA1311		
Our Reference		252698-B-3
Your Reference	UNITS	S-02188.001-TP02_0.1
Depth		0.1
Date Sampled		01/10/2020
Type of sample		soil
Date extracted	-	29/10/2020
Date analysed	-	29/10/2020
Nickel in TCLP	mg/L	0.03

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004. Please note that the mass used may be scaled down from the default based on sample mass available.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			28/10/2020	[NT]	[NT]	[NT]	[NT]	28/10/2020	[NT]
Date analysed	-			28/10/2020	[NT]	[NT]	[NT]	[NT]	28/10/2020	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	104	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	102	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	116	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	118	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	112	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	116	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	134	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	112	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	103	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: Metals in TCLP USEPA1311					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			29/10/2020	[NT]	[NT]	[NT]	[NT]	29/10/2020	[NT]
Date analysed	-			29/10/2020	[NT]	[NT]	[NT]	[NT]	29/10/2020	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	[NT]	[NT]	100	[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.

Andrew (Fitzy) Fitzsimons

252698-C

Due: 3/11/20

From: Lochlan Browne <Lochlan.Browne@edp-au.com>
Sent: Tuesday, 27 October 2020 12:14 PM
To: Simon Song
Cc: Samplereceipt
Subject: RE: Sample Receipt for 252698-B S-02188.001

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Simon,

Could I please also add TCLP testing for the following samples on standard TAT:

- 252698-72 / S-02188.001-TP19_0.1 (nickel)
- 252698-74 / S-02188.001-TP19_0.5 (PAH)

Any problems please let me know.

Thanks,

Lochlan Browne
HSE Consultant

M: +61 432 226 858 | **P:** +61 2 8484 5810
E: lochlan.browne@edp-au.com | Connect on LinkedIn
Our Office: Suite 101, 52 Atchison Street,
St Leonards, NSW 2065, Australia

From: Simon Song <SSong@envirolab.com.au>
Sent: Monday, 26 October 2020 6:00 PM
To: Lochlan Browne <Lochlan.Browne@edp-au.com>; Ryan Jacka <Ryan.Jacka@edp-au.com>; Matthew Konza <Matthew.Konza@edp-au.com>
Subject: Sample Receipt for 252698-B S-02188.001

Please refer to attached for:
a copy of the COC/paperwork received from you
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.

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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne

Sample Login Details

Your reference	S-02188.001
Envirolab Reference	252698-C
Date Sample Received	02/10/2020
Date Instructions Received	27/10/2020
Date Results Expected to be Reported	03/11/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	93 soil, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
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:

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP01_0.1-0.1																				✓
S-02188.001-TP01_1.0-1																				✓
S-02188.001-TP02_0.1-0.1																				✓
S-02188.001-TP02_0.5-0.5																				✓
S-02188.001-TP02_0.9-0.9																				✓
S-02188.001-TP03_0.1-0.1																				✓
S-02188.001-TP03_1.0-1																				✓
S-02188.001-TP03_1.2-1.2																				✓
S-02188.001-TP04_0.3-0.3																				✓
S-02188.001-TP04_1.2-1.2																				✓
S-02188.001-TP05_0.1-0.1																				✓
S-02188.001-TP05_1.0-1																				✓
S-02188.001-TP05_1.4-1.4																				✓
S-02188.001-BH01_2.0-2																				✓
S-02188.001-BH01_3.0-3																				✓
S-02188.001-BH01_4.0-4																				✓
S-02188.001-BH01_5.0-5																				✓
S-02188.001-TP06_0.1-0.1																				✓
S-02188.001-TP06_1.0-1																				✓
S-02188.001-TP07_0.1-0.1																				✓

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customerservice@envirolab.com.au
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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP07_1.0-1																				✓
S-02188.001-TP07_1.3-1.3																				✓
S-02188.001-BH05_2.0-2																				✓
S-02188.001-BH05_3.0-3																				✓
S-02188.001-BH05_4.0-4																				✓
S-02188.001-BH05_5.0-5																				✓
S-02188.001-TP08_0.2-0.2																				✓
S-02188.001-TP08_1.0-1																				✓
S-02188.001-TP08_1.2-1.2																				✓
S-02188.001-TP09_0.1-0.1																				✓
S-02188.001-TP09_1.0-1																				✓
S-02188.001-TP09_1.5-1.5																				✓
S-02188.001-TP10_0.2-0.2																				✓
S-02188.001-TP10_0.9-0.9																				✓
S-02188.001-TP10_1.0-1																				✓
S-02188.001-TP11_0.1-0.1																				✓
S-02188.001-TP11_1.0-1																				✓
S-02188.001-TP11_1.2-1.2																				✓
S-02188.001-TP12_0.2-0.2																				✓
S-02188.001-TP12_1.0-1																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP12_1.3-1.3																				✓
S-02188.001-TP13_0.3-0.3																				✓
S-02188.001-TP13_1.0-1																				✓
S-02188.001-TP13_1.3-1.3																				✓
S-02188.001-BH02_2.0-2																				✓
S-02188.001-BH02_3.0-3																				✓
S-02188.001-BH02_4.0-4																				✓
S-02188.001-BH02_5.0-5																				✓
S-02188.001-TP14_0.3-0.3																				✓
S-02188.001-TP14_1.0-1																				✓
S-02188.001-TP14_1.2-1.2																				✓
S-02188.001-TP15_0.1-0.1																				✓
S-02188.001-TP15_1.0-1																				✓
S-02188.001-TP15_1.4-1.4																				✓
S-02188.001-BH03_2.0-2																				✓
S-02188.001-BH03_3.0-3																				✓
S-02188.001-BH03_4.0-4																				✓
S-02188.001-BH03_5.0-5																				✓
S-02188.001-TP16_0.1-0.1																				✓
S-02188.001-TP16_1.0-1																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-TP16_1.2-1.2																				✓
S-02188.001-BH04_2.0-2																				✓
S-02188.001-BH04_3.0-3																				✓
S-02188.001-BH04_4.0-4																				✓
S-02188.001-BH04_5.0-5																				✓
S-02188.001-TP17_0.1-0.1																				✓
S-02188.001-TP17_0.5-0.5																				✓
S-02188.001-TP17_1.1-1.1																				✓
S-02188.001-TP18_0.1-0.1																				✓
S-02188.001-TP18_0.5-0.5																				✓
S-02188.001-TP18_1.0-1																				✓
S-02188.001-TP19_0.1-0.1	✓																		✓	
S-02188.001-TP19_0.3-0.3																				✓
S-02188.001-TP19_0.5-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
S-02188.001-TP19_1.5-1.5																				✓
S-02188.001-TP20_0.1-0.1																				✓
S-02188.001-TP20_1.0-1																				✓
S-02188.001-TP20_1.5-1.5																				✓
S-02188.001-AS001-0.5																				✓
S-02188.001-QA01																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel in TCLP	On Hold
S-02188.001-QA03																				✓
S-02188.001-QA05																				✓
S-02188.001-QA07																				✓
S-02188.001-QA09																				✓
S-02188.001-QA10																				✓
S-02188.001-RB01																				✓
S-02188.001-RB02																				✓
S-02188.001-TB01																				✓
S-02188.001-TB02																				✓
S-02188.001-TS01																				✓
S-02188.001-TS02																				✓
S-02188.001-TP04_1.0-1.0																				✓
S-02188.001-TP14_0.3-0.3																				✓
S-02188.001-TP14_1.0-1.0																				✓
S-02188.001-TP08_1.2 - [TRIPLICATE]-1.2																				✓

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

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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.

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CERTIFICATE OF ANALYSIS 252698-C

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne
Address	Suite 6/52 Atchison St, ST LEONARDS, NSW

Sample Details

Your Reference	**S-02188.001**
Number of Samples	93 soil, 1 material
Date samples received	02/10/2020
Date completed instructions received	27/10/2020

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	03/11/2020
Date of Issue	02/11/2020

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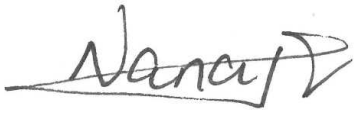
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Dragana Tomas, Senior Chemist
Jaimie Loa-Kum-Cheung, Metals Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid			
Our Reference		252698-C-72	252698-C-74
Your Reference	UNITS	S-02188.001-TP19_0.1	S-02188.001-TP19_0.5
Depth		0.1	0.5
Date Sampled		1/10/2020	1/10/2020
Type of sample		soil	soil
pH of soil for fluid# determ.	pH units	9.9	9.5
pH of soil TCLP (after HCl)	pH units	2.3	1.9
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.9	5.3

PAHs in TCLP (USEPA 1311)		
Our Reference		252698-C-74
Your Reference	UNITS	S-02188.001-TP19_0.5
Depth		0.5
Date Sampled		1/10/2020
Type of sample		soil
Date extracted	-	28/10/2020
Date analysed	-	28/10/2020
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	104

Metals in TCLP USEPA1311		
Our Reference		252698-C-72
Your Reference	UNITS	S-02188.001-TP19_0.1
Depth		0.1
Date Sampled		1/10/2020
Type of sample		soil
Date extracted	-	29/10/2020
Date analysed	-	29/10/2020
Nickel in TCLP	mg/L	<0.02

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004. Please note that the mass used may be scaled down from the default based on sample mass available.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	252698-C-74
Date extracted	-			28/10/2020	[NT]	[NT]	[NT]	[NT]	28/10/2020	28/10/2020
Date analysed	-			28/10/2020	[NT]	[NT]	[NT]	[NT]	28/10/2020	28/10/2020
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	104	111
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	102	124
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	116	117
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	118	123
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	112	120
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	116	130
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	134	114
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	112	127
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	103	[NT]	[NT]	[NT]	[NT]	92	90

QUALITY CONTROL: Metals in TCLP USEPA1311						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			29/10/2020	72	29/10/2020	29/10/2020		29/10/2020	[NT]
Date analysed	-			29/10/2020	72	29/10/2020	29/10/2020		29/10/2020	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	72	<0.02	<0.02	0	100	[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.

Ming To

From: Lochlan Browne <Lochlan.Browne@edp-au.com>
Sent: Thursday, 29 October 2020 2:44 PM
To: Simon Song; Samplereceipt
Subject: RE: Sample Receipt for 252698-C S-02188.001

Ref: 252698-D
TAT: Standard
Due: 05/11/2020 MT

Hi Simon,

Could I please add another sample for TCLP analysis?

- 252698-44 / S-02188.001-TP13_1.3 (Lead)

Any problems please let me know.

Thanks

Lochlan Browne
HSE Consultant

M: +61 432 226 858 | **P:** +61 2 8484 5810
E: lochlan.browne@edp-au.com | Connect on LinkedIn
Our Office: Suite 101, 52 Atchison Street,
St Leonards, NSW 2065, Australia

From: Simon Song <SSong@envirolab.com.au>
Sent: Tuesday, 27 October 2020 4:01 PM
To: Lochlan Browne <Lochlan.Browne@edp-au.com>
Subject: Sample Receipt for 252698-C S-02188.001

Please refer to attached for:
a copy of the COC/paperwork received from you
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

Results will be available by 6.30pm on the date indicated.

PLEASE NOTE COMBO PRICES WILL ONLY APPLY IF COMBOS ARE SELECTED ON COC.

We have a new reporting format and would welcome your feedback. Sydney@envirolab.com.au

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SAMPLE RECEIPT ADVICE

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne

Sample Login Details

Your reference	S-02188.001
Envirolab Reference	252698-D
Date Sample Received	02/10/2020
Date Instructions Received	29/10/2020
Date Results Expected to be Reported	05/11/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	93 soil, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.9
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:

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
S-02188.001-TP01_0.1-0.1						✓
S-02188.001-TP01_1.0-1						✓
S-02188.001-TP02_0.1-0.1						✓
S-02188.001-TP02_0.5-0.5						✓
S-02188.001-TP02_0.9-0.9						✓
S-02188.001-TP03_0.1-0.1						✓
S-02188.001-TP03_1.0-1						✓
S-02188.001-TP03_1.2-1.2						✓
S-02188.001-TP04_0.3-0.3						✓
S-02188.001-TP04_1.2-1.2						✓
S-02188.001-TP05_0.1-0.1						✓
S-02188.001-TP05_1.0-1						✓
S-02188.001-TP05_1.4-1.4						✓
S-02188.001-BH01_2.0-2						✓
S-02188.001-BH01_3.0-3						✓
S-02188.001-BH01_4.0-4						✓
S-02188.001-BH01_5.0-5						✓
S-02188.001-TP06_0.1-0.1						✓
S-02188.001-TP06_1.0-1						✓
S-02188.001-TP07_0.1-0.1						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
S-02188.001-TP07_1.0-1						✓
S-02188.001-TP07_1.3-1.3						✓
S-02188.001-BH05_2.0-2						✓
S-02188.001-BH05_3.0-3						✓
S-02188.001-BH05_4.0-4						✓
S-02188.001-BH05_5.0-5						✓
S-02188.001-TP08_0.2-0.2						✓
S-02188.001-TP08_1.0-1						✓
S-02188.001-TP08_1.2-1.2						✓
S-02188.001-TP09_0.1-0.1						✓
S-02188.001-TP09_1.0-1						✓
S-02188.001-TP09_1.5-1.5						✓
S-02188.001-TP10_0.2-0.2						✓
S-02188.001-TP10_0.9-0.9						✓
S-02188.001-TP10_1.0-1						✓
S-02188.001-TP11_0.1-0.1						✓
S-02188.001-TP11_1.0-1						✓
S-02188.001-TP11_1.2-1.2						✓
S-02188.001-TP12_0.2-0.2						✓
S-02188.001-TP12_1.0-1						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
S-02188.001-TP12_1.3-1.3						✓
S-02188.001-TP13_0.3-0.3						✓
S-02188.001-TP13_1.0-1						✓
S-02188.001-TP13_1.3-1.3	✓	✓	✓	✓	✓	
S-02188.001-BH02_2.0-2						✓
S-02188.001-BH02_3.0-3						✓
S-02188.001-BH02_4.0-4						✓
S-02188.001-BH02_5.0-5						✓
S-02188.001-TP14_0.3-0.3						✓
S-02188.001-TP14_1.0-1						✓
S-02188.001-TP14_1.2-1.2						✓
S-02188.001-TP15_0.1-0.1						✓
S-02188.001-TP15_1.0-1						✓
S-02188.001-TP15_1.4-1.4						✓
S-02188.001-BH03_2.0-2						✓
S-02188.001-BH03_3.0-3						✓
S-02188.001-BH03_4.0-4						✓
S-02188.001-BH03_5.0-5						✓
S-02188.001-TP16_0.1-0.1						✓
S-02188.001-TP16_1.0-1						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
S-02188.001-TP16_1.2-1.2						✓
S-02188.001-BH04_2.0-2						✓
S-02188.001-BH04_3.0-3						✓
S-02188.001-BH04_4.0-4						✓
S-02188.001-BH04_5.0-5						✓
S-02188.001-TP17_0.1-0.1						✓
S-02188.001-TP17_0.5-0.5						✓
S-02188.001-TP17_1.1-1.1						✓
S-02188.001-TP18_0.1-0.1						✓
S-02188.001-TP18_0.5-0.5						✓
S-02188.001-TP18_1.0-1						✓
S-02188.001-TP19_0.1-0.1						✓
S-02188.001-TP19_0.3-0.3						✓
S-02188.001-TP19_0.5-0.5						✓
S-02188.001-TP19_1.5-1.5						✓
S-02188.001-TP20_0.1-0.1						✓
S-02188.001-TP20_1.0-1						✓
S-02188.001-TP20_1.5-1.5						✓
S-02188.001-AS001-0.5						✓
S-02188.001-QA01						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	On Hold
S-02188.001-QA03						✓
S-02188.001-QA05						✓
S-02188.001-QA07						✓
S-02188.001-QA09						✓
S-02188.001-QA10						✓
S-02188.001-RB01						✓
S-02188.001-RB02						✓
S-02188.001-TB01						✓
S-02188.001-TB02						✓
S-02188.001-TS01						✓
S-02188.001-TS02						✓
S-02188.001-TP04_1.0-1.0						✓
S-02188.001-TP14_0.3-0.3						✓
S-02188.001-TP14_1.0-1.0						✓
S-02188.001-TP08_1.2 - [TRIPLICATE]-1.2						✓

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

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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.

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CERTIFICATE OF ANALYSIS 252698-D

Client Details

Client	EDP Consultants Pty Ltd
Attention	Lochlan Browne
Address	Suite 6/52 Atchison St, ST LEONARDS, NSW

Sample Details

Your Reference	**S-02188.001**
Number of Samples	93 soil, 1 material
Date samples received	02/10/2020
Date completed instructions received	29/10/2020

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	05/11/2020
Date of Issue	03/11/2020

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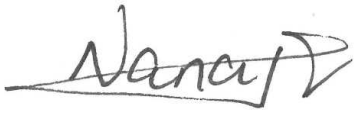
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Ken Nguyen, Reporting Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

Metals in TCLP USEPA1311		
Our Reference		252698-D-44
Your Reference	UNITS	S-02188.001-TP13_1.3
Depth		1.3
Date Sampled		1/10/2020
Type of sample		soil
Date extracted	-	02/11/2020
Date analysed	-	02/11/2020
pH of soil for fluid# determ.	pH units	8.0
pH of soil TCLP (after HCl)	pH units	1.7
Extraction fluid used	-	1
pH of final Leachate	pH units	5.0
Lead in TCLP	mg/L	<0.03

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004. Please note that the mass used may be scaled down from the default based on sample mass available.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

QUALITY CONTROL: Metals in TCLP USEPA1311					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/11/2020	[NT]	[NT]	[NT]	[NT]	02/11/2020	[NT]
Date analysed	-			02/11/2020	[NT]	[NT]	[NT]	[NT]	02/11/2020	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	102	[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.

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