

CHARTER HALL

ENVIRONMENTAL DUE DILIGENCE ASSESSMENT - PHASE I AND II - 600 WOODSTOCK AVENUE, ROOTY HILL NSW

DECEMBER 2021

wsp



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Environmental Due Diligence Assessment - Phase I and II - 600 Woodstock Avenue,
Rooty Hill NSW

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EXECUTIVE SUMMARY

WSP Australia Pty Ltd (WSP) was engaged by Charter Hall Holdings Pty Ltd (Charter Hall) to conduct a Phase I Environmental Due Diligence (EDD) Assessment of the property located at 600 Woodstock Avenue, Rooty Hill NSW ('Site').

WSP understands that the project objective is to identify and assess potential environmental risks and issues at the subject property ('the Site') in the context of a proposed acquisition and development of a 1.98 hectare (Ha) site with warehouse with ancillary offices, loading dock and car parking. The scope of works completed as part of this Phase I and II EDD included a desktop study to review the Site environmental setting, history and environmental regulatory status and an intrusive site assessment comprising the drilling of 13 boreholes, installation of 4 monitoring wells and laboratory analysis of soil and groundwater samples.

The Site comprises a fibre glass 'manufacturing' facility situated within two adjoining main warehouses and is legally identified as Lot 67 in DP 804292. The warehouse in the north-west of the Site comprised the manufacturing area and the warehouse in the south-east of the Site comprised the storage and distribution operations for the final product. A former wastewater treatment plant (WWTP) and a disused elevated furnace above a concrete-lined pit are also located at the Site. The Site previously manufactured insulation products, but now cardboard and foil products are received and glued together to form the final insulation product. The current surrounding land uses are primarily industrial or commercial. Historically, the Site has been vacant land since at least 1986 when the Site was cleared of vegetation and a warehouse structure was developed in the north-western portion of the Site. Extensions to the Site warehouse and associated infrastructure (inclusive of concrete hardstand, roadways and carparking) then continued up to 2004.

A search of the NSW EPA Contaminated Sites database (www.epa.nsw.gov.au/prclmapp/searchregister), conducted 19 July 2021, indicated that neither the Site nor the surrounding properties are currently registered on the list of sites notified to NSW EPA, or currently regulated by the NSW EPA as a contaminated site.

A search of the NSW EPA Protection of the Environment Act, public register of licence, applications and notices was conducted on 19 July 2021. The search did not identify any record for the Site under the *Protection of the Environment Operations Act 1997*. Infrabuild Steel Pty Ltd, located at 22 Kellogg Road, Rooty Hill (directly adjacent the Site to the south) currently holds a POEO Act license (EPL: 6125) for various processing and waste generating activities. In October 2013, Infrabuild Pty Ltd was issued with a penalty notice for contravening a condition of their license at this facility (Notice number: 3085772297). No further details of this infringement were available. Infrabuild Steel was also reported on the NSW ERPA contaminated site list, however, it does not require regulation. Holcim Pty Ltd, located at 604 Woodstock Avenue, Rooty Hill (directly adjacent the Site to the east) currently holds a POEO licence (EPL: 1310) for "Concrete works; 25,000-50,000 m³ annual production capacity".

In the current manufacturing area (western portion of the Site warehouse), housekeeping was observed to be good at the time of the inspection. However, in the former manufacturing area (eastern portion of the Site warehouse), housekeeping was observed to be average at the time of inspection, with staining of hardstand and leaks and spills observed surrounding the formaldehyde tanks and former WWTP footprint. Cracks were noted in the concrete of the former WWTP base. Concrete hardstand elsewhere on Site was noted to be in an acceptable condition.

WSP undertook intrusive assessment works on 16 to 18 August 2021. The investigation identified that the Site is underlain by fill comprising gravelly sandy clay, clayey sand and silty clay with fine to coarse angular gravels to a maximum depth of 1.3 mBGL. The fill was underlain by natural clay to a maximum depth of 6.0 mBGL, underlain by weathered shale and shale to the maximum investigation depth of 10.0 mBGL.

No contaminants of concern in soil were at concentrations above the human health adopted investigation criteria for commercial/industrial land use. Concentrations of nickel were above the ecological adopted investigation criteria for commercial/industrial land use, however, these concentrations are not considered to present a risk as no stressed vegetation was noted on Site and the Site will continue to be used as a commercial/industrial facility with minor areas of vegetation.

Minor concentrations of TRH, total creosol, total phenol fenitrothion and methyl parathion were detected during laboratory analysis. These could be attributed to the former or current site activities, however, they are not considered to present a risk to future site users as they will not come into contact with the subsurface soil due to the presence of hardstand across the Site. Contact with soil during construction can be managed by implementation of a CEMP.

Shallow soils are generally non- to moderately saline. Salinity on the Site appears to generally increase with depth. During intrusive investigation no evidence of shallow groundwater (<1m) was observed. Deeper structures (including footings, piles and service trenches) extending into the shale lithology should have salinity resistant materials incorporated into their design. Based on the results from this preliminary investigation salinity does not present a significant risk of corrosion to shallow structures. To minimise the impact of the water and salt processes on the development, possible management options may include careful installation of damp-proof courses and good site drainage.

Soils tested on the Site were generally sodic in nature. Sodic soils present an elevated erosion hazard on-site. Development works should be planned to accommodate for the elevated potential for erosion and sediment generation in runoff and the final development should ensure adequate protection of soils (e.g. through maintenance of vegetation coverage).

No contaminants of concern in groundwater were at concentrations above the adopted assessment criteria for freshwater with the exception of concentrations of cadmium, copper, nickel and zinc. Concentrations of copper, nickel and zinc above the adopted assessment criteria for the protection of freshwater are likely reflective of background concentrations. Concentration of cadmium above the adopted assessment criteria for the protection of freshwater are potentially related to the industrial nature of the larger area that the Site is located within.

MEK, MIBK, acetone, bis(2-ethylhexyl) phthalate and di-n-butyl phthalate detected in the groundwater at the Site. The former or current operations of the Site are potentially the source of these contaminants. There is the potential for higher concentrations of these contaminants to be elsewhere on Site and so a further contaminated land assessment, including soil vapour assessment, should be undertaken after site demolition and removal of the potential contamination sources and prior to site redevelopment.

Further investigations may be warranted if the proposed future land-use scenario changes for the Site.

1 PROJECT BACKGROUND

1.1 BACKGROUND

WSP Australia Pty Ltd (WSP) was engaged by Charter Hall Holdings Pty Ltd (Charter Hall) to conduct a Phase I and II Environmental Due Diligence (EDD) Assessment of the property located at 600 Woodstock Avenue, Rooty Hill NSW ('Site'). The Site is defined as Lot 67 on Deposited Plan (DP) 804292. A site location plan is provided in Figure 1 and a site layout plan is provided in Figure 2 (Appendix A).

WSP understands that the project objective is to identify and assess potential environmental risks and issues at the Site in the context of the proposed acquisition and redevelopment of the Site. The Site currently comprises a warehouse utilised for insulation manufacturing, storage and distribution, and also includes ancillary offices, exterior hardstand storage areas, loading dock and car parking. Based on information provided by Charter Hall, WSP understands that the proposed redevelopment comprises demolition of existing Site structures (with the exception of offices located in the northern portion of the Site) and the construction of a warehouse, waste sorting/storage area, vehicle manoeuvring areas and car parking. The warehouse footprint is proposed to cover the majority of the Site, with minor landscaped areas adjacent to the north, west and south Site boundaries.

Various background and historical information provided by Charter Hall and via online databases is referred to in this EDD report.

EDD works were undertaken in general accordance with WSP's proposals dated 12 July and 12 August 2021.

1.2 OBJECTIVE

The objective of the Phase I and II EDD assessment was to collect environmental data to support Charter Hall's due diligence for the proposed acquisition of the Site. The assessment was required to be undertaken with reference to the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM; as amended 2013), to evaluate the Site with respect to:

- potential contamination and salinity hazard of soil and groundwater;
 - the Site's suitability for ongoing commercial/industrial land use, inclusive of a proposed redevelopment for warehousing purposes; and
 - any other environmental matters of potential concern relating to contamination in soil, environmental planning and environmental compliance which may affect or restrict the potential feasibility of the acquisition and subsequent redevelopment of the Site.
-

1.3 SCOPE

To achieve the project objective, the following scope of work was completed:

- a desktop study of the Site to gather the following information:
 - property details and location;
 - current and proposed land use, Site zoning and environmental planning controls;
 - geology and hydrogeology, including topography and local and regional soil types and landscapes;
- a review of historical Site documentation including:
 - current and former use of the Site;

- historical aerial photographs;
- contaminated land records held by the NSW Environment Protection Authority (EPA);
- bore records held by the NSW Department of Industry;
- a Site inspection/walkover;
- drilling of 13 boreholes targeting areas of concern identified during the desktop and the proposed development footprint;
- installation of groundwater monitoring wells in four of the boreholes advanced;
- collection of soil samples from each of the boreholes advanced and submission for laboratory analysis for a selection of contaminants of potential concern (COPCs), including total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAHs), heavy metals, phenols, polychlorinated biphenyls (PCBs), organochlorine and organophosphate pesticides (OCPs and OPPs), formaldehyde, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and asbestos;
- analysis of select soil samples for exchangeable sodium percentage, chloride and sulfate concentration and pH/electrical conductivity (EC) for the salinity assessment; and
- collection of groundwater samples from the installed monitoring wells and submission for laboratory analysis for a selection of COPCs, including TRH, BTEXN, PAHs, heavy metals, phenols, PCBs, formaldehyde, VOCs, SVOCs and chlorinated solvents.

2 SITE DESCRIPTION

2.1 SITE DETAILS

Details of the Site location, ownership, zoning and current Site use are provided in Table 2.1 below (refer to Figure 1, Appendix A for a Site location plan and Figure 2, Appendix A for a Site layout plan).

Table 2.1 Site identification

Site Address	600 Woodstock Avenue, Rooty Hill NSW
Legal Description	Lot 67 in DP 804292
Size	Approximately 1.98 Ha. The existing warehouse structures on the Site to be redeveloped cover an area of approximately 12,000 m ² .
Current Site Use	Occupied by Fletcher Insulation Pty Ltd for the manufacture, storage and distribution of building insulation products.
Zoning	IN1 – General Industry
Local Planning Instrument	Blacktown Local Environmental Plan (LEP) 2015

2.2 SITE LAYOUT AND OPERATIONS

A Site inspection was completed by WSP on 16 July 2021. Sean Blazey, an Employee from Fletcher Insulation Pty Ltd, escorted WSP during the Site inspection and provided Site-specific information in an informal interview.

At the time of the inspection the Site comprised a fibre glass ‘manufacturing’ facility situated within two adjoined main warehouses; the warehouse in the north-west of the Site comprised the manufacturing area and the warehouse in the south-east of the Site comprised the storage and distribution operations for the final product. A former wastewater treatment plant (WWTP) and a disused elevated furnace above a concrete-lined pit are also located at the Site. The Site previously manufactured insulation products, but now cardboard and foil products are received and glued together to form the final insulation product.

Relevant photographs taken during the inspection are provided in Appendix E.

2.3 SURROUNDING LAND USES

The Site is located within a predominantly industrial area. Adjacent land uses include:

- North: Multiple industrial properties including vehicle repair / maintenance and aluminium casting;
- East: Industrial manufacturing facility operated by “Humes Pty Ltd” for the production of concrete products;
- South: Industrial manufacturing facility operated by “InfraBuild Steel Pty Ltd” for the production of steel products; and
- West: Multiple warehouse facilities for the production of goods such as kitchen and concrete products and construction material testing.

2.4 CLIENT PROVIDED INFORMATION

WSP were not provided with any previous contamination assessment reports pertaining to the Site.

3 SITE HISTORY

3.1 HISTORICAL AERIAL PHOTOGRAPHS

A review of historical aerial photography covering the Site and surrounding area was undertaken with a summary of the observed land-use changes described in Table 3.1 using freely accessible aerial photographs. Historical aerial photographs are included in Appendix F.

Table 3.1 Historical Aerial Photograph Review

YEAR	SITE	SURROUNDING LAND
1947	The Site was vacant land, with some trees. Dirt tracks were observed across the Site, trending from the northern boundary to south-east and south-west.	Immediate land to the east and west was vacant land, with some trees. Woodstock Road was established, running east to west along the northern Site boundary. Immediate land to the south and north across Woodstock Road was grassed and appeared to be used for grazing.
1965	No apparent changes to the Site with the exception of an indication of increased density of vegetation.	A small structure, inferred to be a residential dwelling had been established to the north-west of the Site on the opposite side of Woodstock Avenue. Scattered rural residential development was identified further to the west the south-west of the site.
1978	No apparent changes to the Site.	Immediate land to the east had been stripped of vegetation and developed. A large warehouse and associated carparking, outdoor shipping container storage and smaller building structures had also been developed. Land to the south-west had been cleared and was under development for what appeared to be a warehouse structure. The residential development identified in the previous photograph has increased further to the west and south-west.
1986	The Site appeared to have been cleared of trees in the northern portion. A warehouse structure, consistent with a portion of the present-day northern warehouse, had been developed. Hardstand appeared to have been applied to areas directly east and south of the warehouse structure. A small shed and shelter areas appear to have been constructed to the east and south adjacent hardstand areas The southern portion of the Site generally remains vegetated.	Kellogg Road was established, running north to south along the western Site boundary. Land directly to the west across Kellogg Road had been stripped of vegetation and two large warehouse structures with associated carparking and roadways had been developed. Construction of the warehouse structure to the south-west of the Site had been completed.

YEAR	SITE	SURROUNDING LAND
1998	Trees had been cleared from the central and southern portions of the Site. An extension to the existing northern warehouse structure had been constructed, covering the centre of the Site. This is consistent with the current northern warehouse layout. What is inferred to be the wastewater treatment plant had been developed towards the eastern-central Site boundary. Hardstand had been applied to the central and southern portions of the Site. A carpark had been constructed towards the southern Site boundary.	Trees had been cleared to the south-east of the Site. The shipping containing storage area to the south-east had been extended. A warehouse structure and associated roadways/car parking had been developed to the south of the Site across Kellogg Road.
2004	A large extension to the existing warehouse structure had been constructed, covering the south-eastern portion of the Site and consistent with the current warehouse layout at that location.	A carpark has been constructed to the north-west of the Site. Substantial roadworks were identified further to the west of the Site.
2014	No apparent changes to the Site.	Several warehouse structures have been developed to the north of the Site across Woodstock Avenue.
2021	The wastewater treatment plant towards the eastern central Site Boundary had been removed. No other apparent changes identified on the Site.	No apparent changes to the surrounding area.

From observations during the Site inspection and a review of historical information and photographs, the Site has been vacant land since at least 1947, until 1986 when the Site was cleared of vegetation and a warehouse structure was developed in the north-western portion of the Site. Extensions to the Site warehouse and associated infrastructure (inclusive of concrete hardstand, roadways and carparking) then continued up to 2004. By the 2021 photograph, the wastewater treatment plant on Site was removed.

The Site has been surrounded by industrial buildings to the south, east and west since approximately 1986.

3.2 CONTAMINATED LAND DATABASE

A search of the NSW EPA Contaminated Sites database (www.epa.nsw.gov.au/prclmapp/searchregister), conducted 19 July 2021, indicated that neither the Site nor the surrounding properties are currently registered on the list of sites notified to NSW EPA, or currently regulated by the NSW EPA as a contaminated site. 22 Kellogg Road (Infrabuild NSW Pty Ltd (formerly OneSteel NSW Pty)) located immediately to the south of the Site is listed as being notified but the report states that "Regulation under CLM Act not required".

3.3 PROTECTION OF THE ENVIRONMENT OPERATIONS REGISTER SEARCH

A search of the NSW EPA Protection of the Environment Operations Act (POEO Act), public register of licence, applications and notices was conducted on 20 July 2021 (<http://www.epa.nsw.gov.au/licensing-and-regulation/>). The register contains information on:

- Environment protection licences (EPLs);
- Applications for new licences and the transfer or variance of existing licences;
- Environment protection and noise control notices;
- Penalty notices issued by the EPA;
- Convictions in prosecutions under the POEO Act;
- The results of civil proceedings;
- Licence review information;
- Exemptions from the provisions of the POEO Act or regulations;
- Approvals granted under clause 9 of the POEO (Control of Burning) Regulation;
- Approvals granted under clause 7A of the POEO (Clean Air) Regulation;
- Any mandatory audits required to be undertaken in relation to a licence;
- Every pollution study required by a condition of a licence;
- Every pollution reduction program required by a condition of a licence; and
- Each penalty notice issued in relation to the premises.

Infrabuild Steel Pty Ltd, located at 22 Kellogg Road, Rooty Hill (directly adjacent the Site to the south) currently holds a POEO Act license (EPL: 6125) for the following activities:

- Crushing, grinding or separating;
- Non-thermal treatment of hazardous and other waste;
- Chemical storage waste generation;
- General chemicals storage;
- Metal waste generation; and
- Metal processing.

In October 2013, Infrabuild Pty Ltd was issued with a penalty notice for contravening a condition of their license at this facility (Notice number: 3085772297). No further details of this infringement were available.

Holcim Pty Ltd, located at 604 Woodstock Avenue, Rooty Hill (directly adjacent the Site to the east) currently holds a POEO licence (EPL: 1310) for “Concrete works; 25,000-50,000 m³ annual production capacity”.

The search did not identify any active licences for the Site or any other properties immediately adjacent the Site under the *Protection of the Environment Operations Act 1997*.

3.4 ZONING, PLANNING RESTRICTIONS AND PERMISSIBLE USE

The Blacktown LEP 2015 maps indicated the Site is zoned IN1 – General Industrial.

According to the *State Environmental Planning Policy No 59 – Central Western Sydney Economic and Employment Area* (SEPP 59), the objectives of the General Industrial area are:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- To minimise adverse impacts on the natural environment.
- The proposed development is consistent with the objectives of the zoning.
- The Site is not located within a biodiversity area or a heritage affected area under the Blacktown LEP (2015).

A search of the NSW Government planning portal was undertaken on 20 July 2021

(<https://www.planningportal.nsw.gov.au/spatialviewer/>) did not identify any environmental planning or heritage restrictions related to the property.

4 ENVIRONMENTAL SETTING

4.1 TOPOGRAPHY AND HYDROLOGY

The natural topography of the surrounding area is generally level, with an approximate elevation of 40 m Australian Height Datum (AHD).

At the time of the Site inspection, the north-eastern corner of the Site was approximately 4 m higher in elevation than the south-eastern corner. The Site sloped gently downgradient from north-east to south.

The nearest natural water body is a drainage channel located approximately 230 m north-west of the Site. The channel appears in historical aerials but has been straightened and appears to now be under Woodstock Avenue. A small tributary of Eastern Creek (Angus Creek), is located approximately 530m south-west of the Site.

Surface water runoff is inferred to trend across hardstand surfaces and enter the stormwater system. Stormwater is then directed off Site towards Angus Creek.

4.2 SOILS AND GEOLOGY

Review of the 1:100,000 Penrith Geological map (NSW Department of Minerals and Energy, 1991), for the Rooty Hill and Glendenning area indicates the site is likely to be underlain by Middle Triassic period Bringelly Shale of the Wianamatta Group. The geological formation is described as follows:

- Rwb: Shale, carbonaceous claystone, claystone, laminite, fine to medium-grained lithic sandstone, rare coal and tuff.

A nearby boundary between alluvial material (denoted as Qal) and the Bringelly Shale (denoted Rwb) is observed on the map. An extract from the geological map is shown in Figure 4.1; the approximate location of the site is denoted with a placemark.

As the Site is situated within an industrial area and evidence suggests it has previously been occupied a manufacturing facility, a variable fill profile is expected across the site (overlying natural geology).

Consolidating the above information, a preliminary natural subsurface profile, which may be encountered at the site is as follows:

- Minor alluvial material such as fine-grained sand, silt and clay (underlying a possibly variable fill profile); and
- Bringelly Shale formations at depth.

This is generally consistent with the subsurface conditions encountered at the Site during drilling works (refer to Section 7.2).

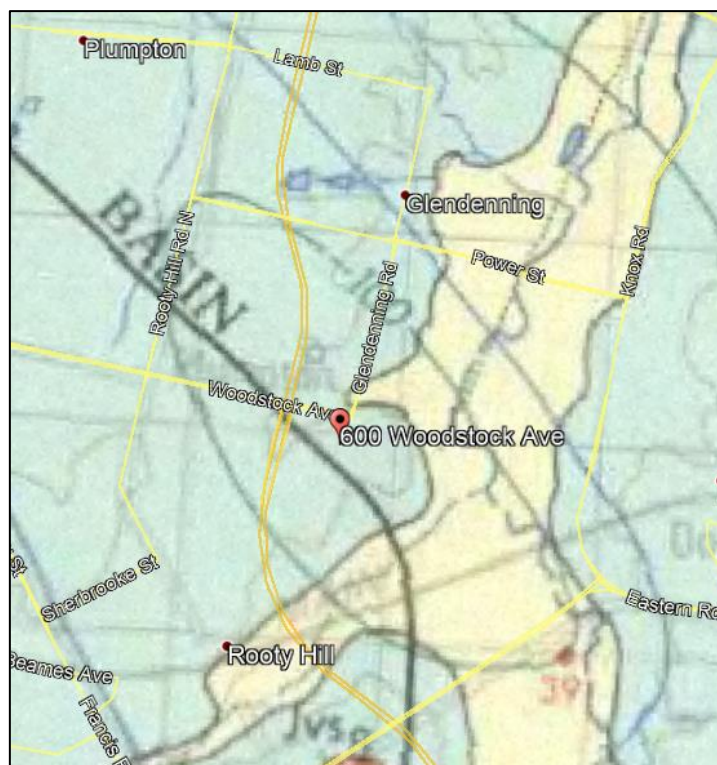


Figure 4.1 Geology in the Glendenning and Rooty Hill area (Penrith 1:100,000 Geological Map, 1991)

A search of the Australian Soil Resource Information System (ASRIS) (www.asris.csiro.au) conducted on 20 July 2021 indicated an extremely low probability of occurrence of acid sulfate soils (ASS) at the Site.

4.3 SALINITY

A search of the eSpade land salinity maps (<https://www.environment.nsw.gov.au/eSpade2WebApp>) conducted on 20 July 2021 indicated a high likelihood of widespread salinity.

The Department for Infrastructure, Planning and Natural Resources *Salinity potential in Western Sydney* (2002) indicates that the Site is located in an area of “moderate salinity” and described as scattered areas of scalding and indicator vegetation noted but no concentrations have been mapped. Saline areas may occur in this zone, which have not yet been identified, or, may occur if risk factor change adversely.

The findings of the salinity testing undertaken as part of the intrusive soil investigation at the Site are presented in Section 7.5.

4.4 HYDROGEOLOGY

A search of the WaterNSW Continuous Water Monitoring Network database conducted on 20 July 2021 indicated no registered groundwater bores are located within a 500 m radius of the Site. However, based on nearby investigations available on WSP’s internal borehole database, relevant bores did not report a groundwater strike during investigation. It should be noted that groundwater levels are subject to seasonal and climatic variations depending on the time of year in which the associated test locations were investigated. Based on the majority of bores reviewed and the location of the Site with respect to local watercourses, it is likely that groundwater is present at depths >3 m below existing ground surface. Perched water may also be present within granular material above cohesive soil layers; more likely directly following periods of heavy rainfall.

The groundwater conditions encountered during borehole drilling at the Site are presented in Section 7.6.

4.5 ENVIRONMENTAL SENSITIVITY

The following relate to environmental sensitivity for the area:

- The Site is within a predominantly industrial area. Low density residential properties are located approximately 315 m west of the Site.
- The nearest natural water body, a small tributary of Eastern Creek (Angus Creek), is located approximately 530 m south-west of the Site. Eastern Creek is located approximately 600 m to the east of the Site.
- Nurragingy Reserve, a small National Reserve is located approximately 400 m to the east of the Site.
- There is no registered beneficial use of groundwater within a 500 m radius of the Site.
- The Site is located within an area of extremely low probability of occurrence of ASS.
- The Site is located in an area of high probability for widespread land salinity (eSpade) or moderate salinity (Department for Infrastructure, Planning and Natural Resources (2002)).

5 SAMPLING AND ANALYSIS PLAN

5.1 SAMPLING PLAN AND RATIONALE

The sampling and analysis program was designed to provide a preliminary assessment of the soil and groundwater conditions across the Site, particularly in areas of environmental concern and in areas of the proposed redevelopment. Borehole locations were located to provide good coverage of the Site, in a quasi-targeted sampling plan to include the proposed building area and areas of potential contamination, and based on Site access.

In accordance with NSW EPA (2017) *Guidelines for NSW Site Auditor Scheme* and Appendix B of Schedule B2 of the NEPM, the data quality objectives (DQOs) process was used to define the type, quantity and quality of the data needed to support decisions relating to the environmental condition of a site.

Sampling locations are summarised in Table 5.1.

Table 5.1 Sampling rationale

BOREHOLE ID	DEPTH (mBGL)	TYPE	RATIONALE
BH01	5.0	Borehole	To assess potential contamination of fill and natural soils.
BH02	2.0	Borehole	To assess potential contamination of fill and natural soils and target the formaldehyde ASTs.
BH03/MW01	9.0	Monitoring well	To assess potential contamination of fill and natural soils and target the area down gradient of the formaldehyde ASTs. To assess groundwater conditions down gradient of the formaldehyde ASTs.
BH04	2.0	Borehole	To assess potential contamination of fill and natural soils and target the WWTP.
BH05/MW02	9.0	Monitoring well	To assess potential contamination of fill and natural soils and target the area down gradient of the WWTP. To assess groundwater conditions down gradient of the WWTP.
BH06	2.0	Borehole	To assess potential contamination of fill and natural soils.
BH07	5.0	Borehole	To assess potential contamination of fill and natural soils.
BH08	1.3	Borehole	To assess potential contamination of fill and natural soils.
BH09/MW03	10.0	Monitoring well	To assess potential contamination of fill and natural soils and target the chlorinated paraffin tanks. To assess groundwater conditions in the vicinity of the chlorinated paraffin tanks.
BH10	2.0	Borehole	To assess potential contamination of fill and natural soils and target the dangerous good store.
BH11	2.0	Borehole	To assess potential contamination of fill and natural soils and target the former transformer.
BH12	2.0	Borehole	To assess potential contamination of fill and natural soils and target the furnace and pit area.

BOREHOLE ID	DEPTH (mBGL)	TYPE	RATIONALE
BH13/MW04	10.0	Monitoring well	To assess potential contamination of fill and natural soils and target the furnace and pit area. To assess groundwater conditions in the vicinity of the furnace and pit area where formaldehyde was formerly used.

5.2 FIELDWORK

The soil sampling program was undertaken 16 to 18 August 2021 (borehole drilling/soil sampling) and 20 August 2021 (groundwater sampling), and comprised:

- drilling of 13 boreholes (BH01 to BH13) in accessible areas across the Site;
- installation of groundwater monitoring wells (MW01 to MW04) in four of the boreholes advanced;
- collection of soil samples from each borehole for subsequent selective laboratory analysis;
- screening of the field samples using a photo-ionisation detector (PID) to assess the presence of any VOCs; and
- collection of groundwater samples from each monitoring wells for subsequent laboratory analysis.

5.2.1 PRELIMINARIES

A health, environment and safety plan (HESP) was prepared prior to going to site. In accordance with WSP policy, all works were undertaken in accordance with the HESP.

A walkover was conducted at the Site prior to intrusive works. The findings are documented in Section 2. All Site locations were cleared by a suitably qualified service locator prior to the commencement of intrusive works, utilising Dial Before You Dig plans provided by asset owners.

5.2.2 FIELD METHODOLOGY

The fieldworks methodologies adopted during the soil and groundwater sampling were consistent with WSP field procedures. These have been summarised in Table 5.2.

Table 5.2 Field methodology

TASK	DESCRIPTION
Service clearance	A suitably qualified service locator undertook service clearance of all sampling locations prior to commencement of drilling works. All boreholes were placed greater than 3 m from identified services.
Concrete coring	Concrete coring was required at all borehole locations, with the exception of BH07.
Borehole drilling	Soil bores were advanced using hand auger to depths of approximately 1.5 m below ground level (BGL), followed by drilling with solid flight augers to depth. Soil logging was conducted during the investigation works by an experienced environmental engineer.

TASK	DESCRIPTION
Soil sampling	Soil samples were generally collected from 0.1 to 0.3 mBGL, 0.5 mBGL, 1.0 mBGL, 1.5 mBGL, 2.0 mBGL and every metre thereafter. Samples were collected from both fill and natural material for all locations. At least one sample from each borehole was analysed based on field observations. All soil samples collected during the works were screened with a calibrated photoionisation detector (PID) to assess if VOCs are present. Samples were collected directly from the hand auger and solid flight auger. Sampling equipment was cleaned with suitable phosphate-free detergent and rinsed with distilled water between sampling locations to minimise the potential for cross-contamination.
Monitoring well installation	Groundwater monitoring wells were constructed using Class 18 flush-jointed polyvinyl chloride (PVC) casing and screened with machine-slotted uPVC pipe with an outside diameter of 50 mm. Sand, comprising clean inert granular silica material (2 mm diameter), was installed in the annulus between the boring and the well to 0.5 m above the slotted section. Hydrated bentonite was placed above the sand pack approximately 1.5 m thick, followed by grout sealing to ground level. Monitoring wells were finished with a flush road box. Monitoring wells were installed to depths of between 9 mBGL (MW01 and MW02) and 10 mBGL (MW03 and MW04).
Well development	The newly constructed monitoring wells were developed approximately two days prior to sampling. During development the wells were purged dry to remove silt/sediment build up at the base of each well using a stainless steel bailer.
Groundwater sampling	Groundwater depth and total well depth was measured to determine the appropriate length of bail cord to ensure the HydraSleeve™ is positioned at the desired depth. The desired depth is one-half sleeve-length below the centre of the screen interval. A 240-gram weight was attached to the bottom of the HydraSleeve™ to ensure it deployed to the desired depth. The HydraSleeve™ was deployed down the well at a slow rate (less than 15 cm per second) to avoid water entering the HydraSleeve™ prematurely. Following displacement of a small quantity of groundwater during installation of the HydraSleeve™, the groundwater level was monitored to verify when stabilisation of the water column had been reached. The estimated theoretical displacement is 16 mm in a nominal 50 mm diameter well, primarily due to the stainless-steel weight attached to the bottom of the sampler. Once the water level recovered to its original elevation, a representative water sample was taken. The HydraSleeve™ was recovered by pulling the cord upward in a smooth motion at a rate of approximately 30 cm per second. This rate of movement allows the top check valve to open and groundwater within the screened well casing to enter the HydraSleeve™. The top check valve closes when the HydraSleeve™ is full. Samples were collected by transferring the groundwater from the HydraSleeve™ to sample bottles by piercing the sleeve with a provided disposable plastic instrument or a disposable syringe. Groundwater parameters were monitored ex-situ using water obtained by the HydraSleeve™. Samples collected for analysis of heavy metals were dispensed into the sample container through a 0.45 µm disposable filter.

TASK	DESCRIPTION
Sample storage	Samples were stored in an insulated cooler box containing ice bricks immediately after sampling, to ensure samples were kept chilled prior to and during delivery to the selected National Association of Testing Authorities (NATA) accredited laboratory.
Quality assurance/ quality control (QA/QC)	Field methodology followed standard industry protocols, with regard to the number of QA/QC samples (intra- and inter-laboratory duplicates, rinsate samples, trip spikes and trip blanks). Soil intra- and inter-laboratory duplicates were collected at a rate of approximately 1 in 20 samples. One rinsate blank was taken during borehole drilling (18 August 2021) and one trip spike and trip blank were submitted for laboratory analysis for the soil sampling program. Groundwater intra- and inter-laboratory duplicates were collected at a rate of approximately 1 in 20 samples. One rinsate blank was taken during the sampling (20 August 2021) and one trip spike and trip blank were submitted for laboratory analysis for the groundwater sampling program.
Waste disposal	Excess soil resulting from drilling was temporarily stored in appropriate waste drums on-Site prior to off-Site disposal.

5.3 LABORATORY ANALYSIS

Primary soil samples were sent to Eurofins Environmental Testing Australia Pty Ltd (Eurofins) in Lane Cove NSW and secondary samples were dispatched to ALS Environmental Pty Ltd (ALS) in Smithfield NSW. Both laboratories are accredited by NATA for the analyses conducted.

A summary of soil and groundwater samples collected at the Site, in addition to the associated laboratory analysis is presented in Table 5.3.

Table 5.3 Laboratory analysis summary

ANALYTE	PRIMARY	DUPLICATES
SOIL		
TRH/BTEXN/PAHs/8 heavy metals	22	2
Phenols	22	2
OCPs/OPPs/PCBs	22	2
Formaldehyde	21	2
VOCs/SVOCs	10	2
Asbestos (presence/absence)	22	-
Exchangeable sodium percentage	5	-
EC	17	-
pH	12	-
Chloride and sulfate	5	-
GROUNDWATER		
TRH/BTEXN/PAHs/8 heavy metals	4	2
Phenols	4	2

ANALYTE	PRIMARY	DUPLICATES
OCPs/OPPs/PCBs	4	2
Formaldehyde	4	2
VOCs/SVOCs	4	2
Chlorinated solvents	4	2

6 ASSESSMENT CRITERIA

To assess the contamination status, the NSW EPA refers to the NEPM (2013), specifically Schedule B1, *Investigation Levels for Soil and Groundwater*. Schedule B1 provides a framework for the use of investigation and screening levels based on a matrix of human health and ecological risks.

6.1 SOIL ASSESSMENT CRITERIA

6.1.1 HEALTH BASED CRITERIA

Schedule B1 of the NEPM (2013) defines health investigation levels (HILs) that have been developed for a broad range of metals and organic contaminants in soil. HILs are scientifically based, generic assessment criteria designed to be used in the first stage (Tier 1 or 'screening') of an assessment of potential risks to human health from chronic exposure to contaminants. The HILs are applicable to all soil types and generally apply to the top 3 m of soil. HILs have been developed for four generic land-use settings:

- HIL A: Residential with garden/accessible soil (homegrown produce <10% fruit and vegetable intake, (no poultry), also includes children's daycare centres, preschools and primary schools)
- HIL B: Residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats
- HIL C: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary school fields 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
- HIL D: Commercial/industrial such as shops, offices, factories and industrial sites.

Taking into consideration the objectives and purpose of the investigation, it is considered appropriate to assess the Site based on both its current and potential uses under the current zoning. The Site is currently zoned IN1 – General Industry under the Blacktown LEP 2015, which permits the use of the Site for commercial/industrial purposes, and the current and proposed uses are commercial/industrial. Therefore, commercial/industrial screening criteria for soil contaminants (i.e. HIL D) have been adopted. The HIL D assessment criteria are summarised in Table 6.1.

Table 6.1 Soil HILs

ANALYTE	HIL D ⁽¹⁾ (mg/kg)
Arsenic	3,000
Cadmium	900
Chromium	3,600
Copper	240,000
Lead	1,500
Mercury	730
Nickel	6,000
Zinc	400,000
Benzo(a)pyrene toxic equivalence quotient (BaP TEQ)	40
Total PAHs	4,000

ANALYTE	HIL D ⁽¹⁾ (mg/kg)
Aldin+Dieldrin	45
chlordan	530
DDT+DDE+DDD	3,600
Endosulfan	2,000
Endrin	1,000
Hexachlorobenzene	80
Methoxychlor	2,500
Toxaphene	160
Chlorpyrifos	2,000
PCBs (Sum)	7
Cresol Total	25,000
Pentachlorophenol	660
Phenol	240,000

Notes:

(1) NEPM (2013) Schedule B1 investigation Levels for Soil and Groundwater

Health screening levels (HSLs) are applicable to the assessment of vapour intrusion risks arising from petroleum hydrocarbons in contaminated soil. The adopted carbon fraction ranges for the HSLs are based on TRH concentrations after subtraction of BTEX compounds and naphthalene.

The HSLs methodology provides for a greater range of site circumstances including the depth of contamination and soil texture. These HSLs have been developed for sand, silt and clay soils based on soil texture classifications. Where there is reasonable doubt as to the appropriate soil texture to select, either a conservative selection should be made (i.e. select coarsest applicable grain size such as sand) or laboratory analysis carried out to determine particle size and hence soil texture sub-class. For the purposes of this investigation, the most conservative approach was selected and the adopted assessment criteria will be based on a subsurface profile comprising sand. The HSLs have been incorporated in Schedule B1 in the context of a wider site assessment framework for petroleum hydrocarbon contamination.

The adopted petroleum assessment criteria for soil have been provided in Table 6.2. Based on the Site's current use and allowable use under the zoning, commercial/industrial land (HSL D) criteria has been adopted.

Table 6.2 Soil HSLs for vapour intrusion

ANALYTE	HSL D, SAND (mg/kg) ⁽¹⁾			
	0 TO <1 m	1 m TO <2 m	2 m TO <4 m	≥4 m
TRH C ₆ -C ₁₀ less BTEX (F1)	260	370	630	NL
TRH >C ₁₀ -C ₁₆ less naphthalene (F2)	NL	NL	NL	NL
Benzene	3	3	3	3
Toluene	NL	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylene	230	NL	NL	NL

ANALYTE	HSL D, SAND (mg/kg) ⁽¹⁾			
	0 TO <1 m	1 m TO <2 m	2 m TO <4 m	≥4 m
Naphthalene	NL	NL	NL	NL

Notes:

(1) NEPM (2013) Schedule B1 investigation Levels for Soil and Groundwater

NL – not limiting i.e. the soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario

6.1.2 ECOLOGICAL BASED CRITERIA

The NEPM (2013) outlines ecological investigation levels (EILs) developed for selected metals and organic substances. These are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physicochemical properties and land-use scenarios and generally apply to the top 2 m of soil. EILs have been developed for three generic land-use settings:

- areas of ecological significance;
- urban residential areas and public open space; and
- commercial and industrial land uses.

Given the zoned and proposed land use for the Site, the calculated EILs for commercial and industrial land use have been adopted. The methodology for developing EILs assumes that the ecosystem present at the Site is adapted to the ambient background concentration (ABC) for the locality and that it is only adding contaminants over and above this background concentration which has an adverse effect on the environment. The ABC of a contaminant is, the soil concentration in a specified locality that is the sum of the naturally occurring background level and the contaminant levels that have been introduced from diffuse or non-point sources by general anthropogenic activity not attributed to industrial, commercial, or agricultural activities, for example, motor vehicle emissions. The added contaminant limits (ACL) is the concentration (above the ABC) of a contaminant, above which further appropriate investigation and evaluation of the impact on ecological values is required.

For initial screening as part of this baseline assessment, ACLs have not been applied. This results in more conservative screening levels for the EILs.

Table 6.3 Soil EILs

ANALYTE	COMMERCIAL AND INDUSTRIAL EILs ⁽¹⁾ (mg/kg)
Arsenic	160
Chromium	310
Copper	85
Lead	1,800
Nickel	55
Zinc	110
Naphthalene	370

Notes:

(1) Ecological investigation levels – Commercial and industrial in sands, Schedule B1 Investigation Levels for Soil and Groundwater NEPM (2013)

Ecological screening levels (ESLs) have been also been developed for selected petroleum hydrocarbon compounds and TRH fractions and are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse and fine

grained soils and various land uses and, like EILs, are generally applicable to the top 2 m of soil. Natural soils at the Site are clays and silty clays, however ESLs defined for coarse soil textures have conservatively been adopted. The ESLs are outlined in Table 6.4.

Table 6.4 Soil ESLs

ANALYTE	COMMERCIAL AND INDUSTRIAL ESLs ⁽¹⁾ (mg/kg)
TRH F1	215
TRH >C ₁₀ -C ₁₆	170
TRH >C ₁₆ -C ₃₄	1,700
TRH >C ₃₄ -C ₄₀	3,300
Benzene	75
Toluene	135
Ethylbenzene	165
Total xylene	180
Benzo(a)pyrene	0.7

Notes:

- (1) Ecological screening levels – Commercial and industrial in sands, Schedule B1 Investigation Levels for Soil and Groundwater NEPM (2013).

As with health-based screening levels, these criteria are screening criteria only; exceedances of these criteria are triggers to undertake additional assessment of the risk to terrestrial ecosystems.

6.2 SOIL SALINITY

A potential risk of salinity was identified during the phase 1 assessment based on available mapping (refer to Section 4.3). Where a risk is confirmed, salinity issues should be managed during construction through preparing and adopting a salinity management plan. Salinity is also an important consideration for future landscaping of the Site as it affects plant growth. Where there are high salt loads plant yield will be deleteriously affected and more sensitive species will not grow.

To assess the issue of dryland salinity, various soil samples were collected from the natural clay material across the Site. As the NEPM (2013) provides no guidelines for the classification of soil salinity, classification guidelines from the following three sources are referred to:

- Department of Land and Water Conservation (DLWC), 2002, *Site Investigations for Urban Salinity*;
- DPNR, 2002, *Salinity Potential in Western Sydney*; and
- Western Sydney Regional Organisation of Councils (WSROC), 2003, *Western Sydney Salinity Code of Practice*.

6.2.1 SOIL SALINITY AS ELECTRICAL CONDUCTIVITY (EC)

Soil salinity at the Site has been assessed with the following definitions from DLWC (2002):

- ‘Non-saline’: <2 mS/cm;
- ‘Slightly saline’: 2 – 4 mS/cm;
- ‘Moderately saline’: 4 – 8 mS/cm;

- ‘Very saline’: 8 – 16 mS/cm; and,
- ‘Highly saline’: >16 mS/cm.

6.2.2 CONCRETE AGGRESSIVENESS AND STEEL CORROSIVENESS

Salinity ranges based on saturated extract method (as per Table 5.32 of Hazelton and Murphy, 2007) are presented in Table 6.5. The laboratory reports salinity in units of uS/cm by the 1:5 soil to water method. These values are converted to EC_E (dS/m) by multiplication of an empirical conversion factor, depending on the soil texture, as presented in Table 5.33 of Hazelton and Murphy (2007). The applied conversion factors and resulting EC_E values for tested samples are provided in Table 6 (Appendix B).

Table 6.5 Exposure classification for concrete piles and plants

RATING	EC _E (DS/M)	EFFECT ON PLANTS ¹	CONCRETE EXPOSURE CLASSIFICATION (AS3600.2009)
Non-Saline	<2	Salinity effects are mostly negligible	-
Slightly Saline	2-4	Yields of sensitive crops are affected	-
Moderately Saline	4-8	Yields of many crops are affected	A2
Highly Saline	8-16	Only tolerant crops yield satisfactorily	B1
Extremely Saline	>16	Only very tolerant crops yield satisfactorily	B2

- (1) Concrete structures exposed to saline soils shall be constructed in accordance with the minimum compliant cement materials stipulated in AS3600.2009 Table 4.8.2.

Table 6.6 Exposure classification for steel piles

CHLORIDES CI		pH	SOIL CONDITIONS A ¹	SOIL CONDITIONS B ²
In Soil %	In Groundwater ppm			
<0.5%	<1,000	>5	Non-aggressive	Non-aggressive
0.5 – 2%	1,000-10,000	4 – 5	Mild	Non-aggressive
2 – 5%	10,000-20,000	3 – 4	Moderate	Mild
>5%	>20,000	<3	Severe	Moderate

Notes:

- 1 Soil conditions A – high permeability soils (e.g. sands and gravels) which are below groundwater.
- 2 Soil conditions B – low permeability soil (e.g. silts and clays) or soils above groundwater.

6.2.3 EROSION AND SOIL DISPERSION

Soil erosion and degradation risk were assessed by analysis of the Exchangeable Sodium Percentage (ESP) and the Emerson Aggregate Dispersibility Test.

ESP is a measurement of how “sodic” soil is. Sodicty is the level of dominance of the chemistry of the soils by sodium ions. High sodium levels increase the erosion risk of soils as they are prone to dispersion when wet. Sodicty also affects the drainage potential of soils. In extreme cases, sodic soils become so dispersive that they become prone to tunnel erosion. With respect to a salinity assessment, the risk is that sodic soils can form poorly drained areas where salts can accumulate, leading to poor plant stabilisation and hence erosion can become an issue.

The ESP of soil is calculated using the formula:

$$\text{ESP (\%)} = (\text{Exchangeable Na} / \text{CEC}) \times 100$$

Where CEC = Cation Exchange Capacity (expressed as meq/100g)

ESP is classified by Hazelton and Murphy (2007) *Interpreting Soil Test Results*, as follows:

- ‘Non-sodic’: <5% ESP;
- ‘Moderately sodic’: 5 – 15% ESP; and
- ‘Highly sodic’: >15% ESP.

6.3 GROUNDWATER ASSESSMENT CRITERIA

The concentrations of contaminants presented in the NEPM (2013) as groundwater investigation levels (GILs) are applicable for assessing ecological and human health risks from direct contact (including consumption) with groundwater. The GILs are the concentrations of contaminants in groundwater above which further investigation or response should be undertaken. GILs are based on the following guidelines:

- ANZG 2018, *Australian & New Zealand Guidelines for Fresh & Marine Water Quality 2018*.
- NHMRC 2011, *Australian Drinking Water Guidelines*.

The GILs provide values for drinking water and protection of freshwater and marine water ecosystems (95% species protection). Given the site location freshwater criteria (95% species protection) have been adopted for screening for potential risks to freshwater ecosystems in the vicinity of the site. The GILs do not provide data for toluene and ethylbenzene, however, as the GILs are based on the ANZECC/ARMCANZ (2000) water quality guidelines, freshwater low reliability trigger values for toluene and ethylbenzene from these guidelines have been considered.

There are no registered groundwater users within 500 m radius of the site, so the NHMRC (2011) drinking water guidelines are not considered relevant to this investigation, however, the drinking water guideline for bis(2-ethylhexyl) phthalate has been adopted in the absence of a freshwater guideline. Additionally, there are no surface water bodies within 1 km of the site that are anticipated to be used for recreational purposes. Given this consideration and the absence of registered groundwater bores utilised for recreational purposes in the vicinity of the site, assessment of potential risks to human health associated with recreational use of water is not considered to be required.

NEPM (2013) Schedule B1 also provides a framework for assessing the human health risk from petroleum compounds and fractions via the inhalation and direct contact pathways through the development and implementation of HSLs. The adopted carbon fraction ranges for the HSLs are based on TRH analysis after subtraction of BTEX compounds and naphthalene. As with the soil HSLs, the groundwater HSLs have been developed for sand, silt and clay soils are listed for several depth intervals. The most conservative sand soil texture has been adopted.

7 RESULTS AND DISCUSSION

7.1 PHASE I INSPECTION OBSERVATIONS

7.1.1 ENVIRONMENTAL PERMITS

The Site manager indicated that no permits or licences are held by the site. The WWTP on Site was subject to a trade waste agreement but as operation has ceased prior to 2020 the Site is no longer be subject to environmental permits.

7.1.2 FUEL AND CHEMICAL MANAGEMENT

No bulk or underground fuel storage is understood to be present on the Site. Identified chemical storage associated with the current and former manufacture processes on Site were located in five above-ground storage tanks (ASTs) at two locations on the site. Three of the ASTs are now disused, following the halt in raw fibreglass manufacture on Site. Chemical storage on Site is further detailed below:

- Two 20,000 L ASTs in the western manufacturing area contained chlorinated paraffin for use as glue in the current manufacturing process. The two tanks were noted to be in good condition and bunded. No visual signs of leaks or spillages were observed;
- Two disused 15,000 L ASTs and one disused 21,000 L AST in the north-eastern former manufacturing area which reportedly formerly contained formaldehyde were located within two dedicated rooms. Two ASTs were empty, but one 15,000 L AST contained approximately 11,000 L of formaldehyde. The ASTs were not bunded and staining was noted on the Site surface;
- A dangerous goods storage cage and adjacent storage area was located in the north-western corner of the warehouse. The following was observed:
 - Two 205 L drums of acetone;
 - Four 205 L drums of heating oil (labelled as Ausheat);
 - Two bulk bags (labelled as 1,555 kg) of calcium carbonate; and
 - Smaller volumes of paints and a locked cabinet.
- 5 x 205 L bunded drums of heating oil adjacent to the furnace. It is understood these drums are no longer used;
- Several 25 kg bags of calcium carbonate stored in the formaldehyde tank room. The bags had disintegrated, and product was observed on the floor; and
- Approximately 35 x 1,555 kg bags of calcium carbonate stored on pallets. The bags were plastic wrapped and no signs of leakage were observed.
- No chemical or waste storage was observed to be stored in the footprint of the WWTP, but it is unknown what waste products may have been stored in the vicinity of the WWTP historically. Some staining was noted in the WWTP footprint.

The locations of the fuel and chemical storage areas identified on the Site are shown on Figure 2 (Appendix A).

7.1.3 IMPORTATION OF FILL MATERIAL

In general, topography on Site was consistent with the surrounding soil landscape. Minor cutting of soil was noted within the building footprint as part levelling works for the original warehouse development works. In the south-western corner and along the western boundary of the Site, undisturbed land with established trees were observed. Refer to the photograph log in Appendix E.

The subsurface conditions encountered on-Site during drilling, including observations of fill material, are summarised in Section 7.2.

7.1.4 WASTE MANAGEMENT, AIR QUALITY AND NOISE

General and recyclable waste is collected by a commercial waste contractor (Cleanaway). Trade waste formerly collected in pits and sumps was pumped out by Veolia Pty Ltd.

The WWTP formerly present on Site (prior to 2020) treated and recycled wastewater and formaldehyde generated during the historical fibreglass manufacturing process.

Current manufacturing activities on Site are likely to generate noise. During the Site inspection, notable noise levels, however not excessive, were observed from the western manufacturing area.

The Site is concrete paved with the exception of a soft landscaped area, with established trees in the south-western corner of the Site. Therefore, potential dust generation from the site is limited.

7.1.5 WATER MANAGEMENT

The following were noted during the Site inspection in relation to water management:

- The Site is connected to municipal water, sewer and stormwater.
- No wastewater treatment currently occurs on Site, following the end of fibreglass manufacture on Site in 2020. Once fibreglass manufacture stopped, the WWTP was decommissioned and removed from the Site.
- There was a fire in the furnace in early 2019. The fire was extinguished by the fire brigade and firehose water, mixed with untreated manufacturing wastewater reportedly ran across the site to the south-east corner (towards Angus Creek to the south-east).

7.1.6 HAZARDOUS BUILDING MATERIALS

WSP were not provided with any previous hazardous building materials or asbestos reports for the Site.

Due to the age of the building (constructed circa 1986 – refer Section 3) and the structural additions to the building between 1986 and 2004, there is the potential for hazardous building materials to have been used as part of the original building construction or subsequent additions which may still be present.

During the Site inspection, asbestos-containing material (ACM) labels were observed within the office space lunchroom ceiling in the north-western portion of the Site.

Additional hazardous building materials can include lead paint, ACM, light fittings and electrical transformers containing PCB oils, and synthetic mineral fibre-based insulation or residues from the historical manufacturing processes or building products.

7.1.7 GENERAL HOUSEKEEPING

In the current manufacturing area (western portion of the Site warehouse), housekeeping was observed to be good at the time of the inspection. However, in the former manufacturing area (eastern portion of the Site warehouse), housekeeping was observed to be average at the time of inspection, with staining of hardstand and leaks and spills observed surrounding the formaldehyde tanks and former WWTP footprint. Cracks were noted in the concrete of the former WWTP base. Concrete hardstand elsewhere on Site was noted to be in an acceptable condition.

7.2 SUBSURFACE CONDITIONS

A summary of the subsurface geological profile encountered at the Site is presented in Table 7.1. Borehole and monitoring wells logs are included in Appendix D.

Table 7.1 Subsurface conditions

DEPTH (mBGL)	GENERAL SOIL DESCRIPTION
0.0 to 0.3	Concrete
0.0 to 1.3	Fill: Gravelly sandy CLAY, clayey SAND and silty CLAY with fine to coarse angular gravels. Trace rootlets at BH04 only and ceramic fragments observed at BH10 only.
0.1 to 6.0	CLAY, grey, brown with red and orange mottles. Ironstone inclusions generally increasing with depth. .
4.1 to 10.0	SHALE: Grey, brown.

7.3 FIELD SCREENING

An acetone-like odour was noted in soil samples collected from a depth of 0.15 to 0.5BGL in BH02 which is located in the vicinity of the former furnace and formaldehyde tanks.

A hydrogen sulfide-like odour was noted in soil samples collected from depths of 0.35 to 2.0 mBGL in soil sampled from BH04 which is located in the vicinity of the former WWTP, in a sample collected from BH05 (located down gradient of the former WWTP) at a depth of 0.2 mBGL and in a sample at a depth of 0.3 mBGL in BH12 located adjacent to the furnace.

No potential asbestos containing material (ACM) was observed.

PID screening did not indicate the presence of VOCs, with all readings reported at background levels of less than 8.8 parts per million (ppm).

7.4 SOIL LABORATORY RESULTS

BTEXN, PAH, OCP, PCB, chlorinated hydrocarbons, VOC and SVOC concentrations in soil samples were below the laboratory limits of reporting (LORs).

Concentrations of TRH C16 - C34 and TRH C34 - C40 were above the LOR in BH04 at a depth of 0.5 mBGL (former WWTP location) and concentrations of TRH C16 - C34 were above the LOR in BH05 at a depth of 0.2 mBGL (located down gradient of the WWTP). None of the concentrations were above the adopted assessment criteria for human health or ecological receptors. Concentrations were below the LORs in all other samples analysed.

Concentrations of arsenic, chromium, copper, lead, nickel and zinc were above the LOR but below adopted assessment criteria in nearly all soil samples collected. Concentrations of nickel were above the adopted assessment criteria for the protection of ecological receptors in samples collected from BH02 (located near the formaldehyde ASTs) at depths of 0.15 mBGL and 0.3 mBGL, BH09 (located near the chlorinated paraffin ASTs) at a depth of 0.1 mBGL and BH11 (located in the foot print of the former transformer) at a depth of 0.2 mBGL. Concentrations were below the LORs in all other samples analysed.

Concentrations of fenitrothion and methyl parathion (OPPs) were above the LORs in a soil sample collected from BH13 (located down gradient of the former furnace) at a depth of 0.3 mBGL. There are no adopted assessment criteria for these analytes. Concentrations were below the LORs in all other samples analysed.

Total cresol and total phenol were above the LOR in a soil sample collected from BH04 at a depth of 0.5 mBGL (former WWTP location). Concentrations were, however, below the adopted assessment criteria. Concentrations were below the LORs in all other samples analysed.

No asbestos or potentially asbestos-containing material was observed on-site at the surface or during drilling. No asbestos was identified by laboratory analysis.

Tabulated analytical results are provided in Appendix B with laboratory certificates provided in Appendix C.

7.5 SALINITY

Summary tables of the salinity laboratory results are provided in Appendix B. A copy of the laboratory certificates is provided in Appendix C.

7.5.1 SOIL SALINITY AS ELECTRICAL CONDUCTIVITY (EC)

When salt dissolves into water it separates into positively and negatively charged ions and increases the conductivity of the water. As such, EC is considered a good indication of salinity in soils. The EC value is obtained by multiplying the laboratory EC (1:5) water extract by the soil texture conversion factor derived from the soil texturing tests. Samples were not tested for soil texture, so the majority were appointed the conversion factor of 6 for heavy clays and some shallow sandy clay samples were appointed the conversion factor of 8.5 for light clays in order to derive the most conservative EC value.

The majority of the Site was underlain by natural clay or shale.

Fill (0.0 - 1.3 mBGL) conductivity ranged from 52 – 200 $\mu\text{S}/\text{cm}$ indicating generally non-saline conditions.

Clay (0.1 – 6.0 mBGL) conductivity ranged from 150 – 1,000 $\mu\text{S}/\text{cm}$ indicating generally non-saline to moderately-saline conditions.

Shale (4.1 - 10.0 mBGL) conductivity ranged from 100 – 730 $\mu\text{S}/\text{cm}$ indicating generally non-saline to moderately-saline conditions.

In general, the salinity in the subsoil is low to moderately saline. Salinity generally increases with depth into the shale.

7.5.2 CONCRETE AGGRESSIVENESS AND STEEL CORROSIVENESS

Sulfate, chloride and pH of soil are analysed to determine the potential for concrete and steel corrosion with respect to a classification of soil condition B (low permeability soils (e.g. silts and clays) or soils above groundwater. Refer to Table 1, Appendix B for soil analytical summary tables.

- Sulfate concentrations ranged from 32 mg/kg to 190 mg/kg, indicating sulfate concentrations which are non-aggressive towards concrete¹;
- Chloride concentrations ranged from 80 mg/kg to 910 mg/kg, indicating chloride concentrations that are non-aggressive to mild towards steel piles¹; and
- pH levels ranged from 5.3 to 8.3 which shows slightly acidic to neutral soil conditions that have a low level of aggressiveness towards concrete and non-aggressiveness towards steel piles¹.

NOTE:

¹ Consideration to the type of building materials utilised within the development area should be given and such materials should be suitably designed for the identified ground conditions.

7.5.3 *EROSION POTENTIAL – EXCHANGABLE SODIUM PERCENTAGE (ESP)*

Soil erosion and degradation risk were assessed by ESP.

ESP levels ranged from 16% to 36%. The five samples were collected from both the clay and shale lithology types encountered on Site and from a variety of depths. The samples tested indicated highly sodic (>15%) soils. This suggests that soils will be prone to erosion if not appropriately stabilised during construction.

7.6 GROUNDWATER RESULTS

Monitoring wells MW01 to MW04 were installed between 16 August and 18 August 2021. Monitoring well logs are presented in Appendix D.

7.6.1 GROUNDWATER CONDITIONS

Gauging of depth to groundwater and sampling of groundwater was undertaken on 20 August 2021. Groundwater was measured between 4.358 and 7.467 m below top of casing (mBTOC). Surveying of the monitoring wells was not undertaken so groundwater flow direction was not calculated.

A summary of the measured field water quality parameters is given below:

- Electrical conductivity measurements ranged from 27,512 $\mu\text{S}/\text{cm}$ to 37,785 $\mu\text{S}/\text{cm}$.
- Redox potential measurements ranged from +84.6 mV to +156.2 mV.
- pH readings ranged from 6.39 and 6.92, indicating generally neutral conditions.
- Dissolved oxygen measurements ranged from 3.07 mg/L to 4.23 mg/L, indicating generally poorly oxygenated groundwater.
- Temperature measurements ranged from 19.1 °C to 21.0 °C.

7.6.2 GROUNDWATER ANALYTICAL RESULTS

BTEXN, TRH, PAH, OCP, OPP, phenols, PCB and chlorinated hydrocarbons concentrations in groundwater samples were below the LORs.

Concentrations of copper, nickel and zinc were reported above the adopted assessment criteria for freshwater protection in all four wells sampled and cadmium was additionally detected in MW01, MW02 and MW04. All other concentrations of metals were below the adopted assessment criteria.

A concentration of bis(2-ethylhexyl) phthalate was reported above the LOR in MW01. There are no freshwater groundwater guidelines for this contaminant so the concentrations have conservatively compared to the drinking water guideline value. The concentration was less than the drinking water guideline. Concentrations of di-n-butyl phthalate were above the LOR in MW01 and MW04 but below the adopted assessment criteria for freshwater protection. All other concentrations of SVOCs were below the adopted assessment criteria.

Concentrations of MEK (MW03 and MW04), 4-methyl-2-pentanone (MIBK) (MW04) and acetone (all wells) were reported above the LOR. There are no adopted assessment criteria for these contaminants. All other concentrations of VOCs were below the LORs.

8 QA/QC

8.1 DATA QUALITY INDICATORS

The data quality indicators (DQIs) for the soil sampling are presented in Table 8.1 and Table 8.2.

Table 8.1 Field DQI performance

DQI	ITEM	CONFORMANCE
Completeness (a measure of the amount of useable data from a data collection activity)	All critical locations sampled	Yes
	WSP documented procedures which are based on accepted industry standard practices complied with	Yes
	Experienced samplers	Yes
	Correct documentation	Yes
Comparability (the confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event)	Same standard operating procedures (SOPs) used on each occasion	NA
	Experience sampler	Yes
	Climatic conditions (temperature, rainfall, etc.)	NA
	Same type of samples collected	NA
Representativeness (the confidence (expressed qualitatively) that data are representative of each media present on the site)	Appropriate media sampled according to proposal	Yes
	All media identified in proposal sampled	Yes
Precision (a quantitative measure of the variability (or reproducibility) of data)	SOPs appropriate and complied with	Yes
	Duplicate samples analysed	Yes
Accuracy (bias) (a quantitative measure of the closeness of reported data to the true value)	SOPs appropriate and complied with	Yes

Table 8.2 Laboratory DQI performance

DQI	ITEM	CONFORMANCE
Completeness	All critical samples analysed	Yes
	All contaminants of concern analysed	Yes

DQI	ITEM	CONFORMANCE
	Appropriate methods and LORs	Partial – Some of the LORs are above the adopted criteria, however, this is not considered to substantially affect the data quality as these analytes are not considered to be potential contaminants.
	Sample documentation complete	Partial – note that the chain of custody identifies the incorrect date for some of the samples collected but these dates have been amended in the data tables.
	Sample holding times complied with	Yes
Comparability	Sample analytical method used	Yes
	Sample LORs consistent	Yes
	Same units	Yes
Representativeness	All relevant samples analysed	Yes
Precision	Analysis of laboratory duplicates	Yes – results are acceptable
	Analysis of field duplicates	Yes – See Section 8.1.1
Accuracy (bias)	Analysis of rinsate blanks (one per batch)	No – low concentrations of copper, zinc and di-n-butyl phthalate were detected in the rinsate sampled collected during the GME. Concentrations of copper and zinc are considered to be consistent with background concentrations and concentrations of di-n-butyl phthalate were not reported in every well and were below the adopted assessment criteria. No concentrations of contaminants were detected in the rinsate sample collected during the drilling works.
	Analysis of reagent blanks	Yes - Refer to laboratory certificates of analysis
	Analysis of method blanks	
	Analysis of matrix spikes and matrix spikes duplicates	
	Analysis of surrogate spikes and laboratory-prepared spikes	
	Analysis of reference materials/control samples	

8.1.1 FIELD DUPLICATES

The purpose of duplicate samples is to estimate the variability of a given characteristic or contaminant associated with a population. Field duplicate samples were collected as follows:

- One intra-laboratory (QA02) and one inter-laboratory (QA02A) duplicate soil samples of primary sample BH9-1.0 were collected for analysis.
- One intra-laboratory (QA01) and one inter-laboratory (QA01A) duplicate groundwater samples of primary sample MW01 were collected for analysis.

This conformed to the ratio specified in the NEPM (2013) of 1 in 20 samples for intra-laboratory duplicates and inter-laboratory duplicates for soil and groundwater analysis.

Duplicate samples were labelled so as to conceal their relationship to the primary sample from the laboratory.

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. Field duplicate groundwater samples were collected by dispensing equal quantities of collected groundwater from the HydraSleeve™ into each of the sampling containers.

Relative percentage differences (RPDs) were calculated for the primary and duplicate samples for assessment of the data quality, in particular for assessment of the reproducibility of the analytical data measurements or ‘precision’ given the adopted field and laboratory methods. The RPDs were calculated using the formula below.

$$RPD\% = \frac{|R_o - R_d|}{|(R_o + R_d) / 2|} \times 100\%$$

where R_o is the primary sample and R_d is the primary duplicate.

The RPD values were compared to the 30% RPD acceptance criterion outlined in NEPM (2013). RPDs for results less than the laboratory LOR were not calculated.

No elevated RPDs were calculated for the groundwater duplicate and triplicate pairs. The elevated RPDs in the soil duplicates are attributed to the heterogeneous nature of the sample rather than an error with the labs precision. The potential limitation in the dataset from the lack of satisfactory inter/intra-laboratory results is considered minimal due to the low concentrations present in the samples and the thorough lab QA/QC involved in each batch. QA/QC results are tabulated in Appendix B.

8.2 SUMMARY OF QA/QC

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during the investigation were consistent with WSP’s protocols. It is considered that the data is adequate for the purpose of the study.

9 DISCUSSION AND CONCLUSIONS

9.1 SOIL RESULTS DISCUSSION

BTEXN, PAH, OCP, PCB, chlorinated hydrocarbons, VOC and SVOC concentrations in soil samples were below the LORs.

Minor concentrations of TRH, total creosol and total phenol were in soil samples collected from BH04 near the former WWTP. A hydrogen sulphide odour and rootlets were also noted at this location. The concentrations could be attributed to the former use of this area as a WWTP.

Concentrations of metals were below the adopted assessment criteria with the exception of concentrations of nickel above the adopted assessment criteria for ecological protection. These concentrations are not considered to present a risk as no stressed vegetation was noted on Site and the Site will continue to be used as a commercial/industrial facility.

Minor concentrations of fenitrothion and methyl parathion (OPPs) were above the LORs in a soil sample collected from down gradient of the former furnace at a depth of 0.3 mBGL. There are no adopted assessment criteria for these contaminants, however, it is not considered likely that future site users will come into contact with the subsurface soil and contact with soil can be managed during construction by a construction environmental management plan (CEMP).

No asbestos was detected in any of the soil samples submitted for laboratory analysis and no potential ACM was observed during site works.

Shallow soil was generally non-saline to moderately-saline. The deeper shale was found to generally be non-saline to moderately saline. The salinity was generally greater with depth.

Soil salinity can impact upon plant growth, suitability of surface water bodies as habitat and affect construction materials and site infrastructure.

Sulfate concentrations indicated that they are non-aggressive towards steel piles, chloride concentrations indicated that they are non-aggressive to mild towards steel piles and pH levels show a low level of aggressiveness towards concrete and non-aggressiveness towards steel piles.

Soil testing for ESP indicated that soils on the Site were generally highly sodic. Soil sodicity reduces the ability of colloids to bind together and thus increases the risk of soil erosion.

9.2 GROUNDWATER RESULTS DISCUSSION

BTEXN, TRH, PAH, OCP, OPP, phenols, PCB and chlorinated hydrocarbons concentrations in groundwater samples were below the LORs.

Concentrations of copper, nickel and zinc above the adopted assessment criteria for the protection of freshwater are likely reflective of background concentrations. Concentration of cadmium above the adopted assessment criteria for the protection of freshwater are potentially related to the industrial nature of the larger area that the Site is located within.

The *Contaminated Land Management Act 1997* (CLM Act) grants powers to the NSW EPA to regulate contaminated sites, including the establishment of guidelines regarding the duty to report contamination. The criteria used to assess contamination to determine whether reporting is required is provided in the *Guidelines on the Duty to Report Land Contamination under the Contaminated Land Management Act 1997* (NSW EPA, 2015).

Under the guidelines, a site must be reported with respect to contamination in groundwater if:

- the contaminant has entered or will foreseeably enter groundwater or surface water; AND

- the concentration of the contaminant in the groundwater or surface water is, or will foreseeably be, above the groundwater investigation level for that contaminant as specified in Section 6, Schedule B1 of the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPC 2013); AND
- the concentration of the contaminant in the groundwater or surface water will foreseeably continue to remain above the specified concentration.

However, the duty to report is not intended to capture the notification of widespread diffuse urban pollution that is not attributed to a specific industrial, commercial or agricultural activity. For this reason, WSP do not consider there is a duty to notify the heavy metal contamination at the Site. It is not considered likely that future site users will come into contact with the groundwater due to its depth and that the Site surface will be sealed with hardstand. Contact with groundwater can be managed during construction by a CEMP.

The current or former site operation is potentially the source of the MEK, MIBK, acetone, bis(2-ethylhexyl) phthalate and di-n-butyl phthalate detected in the groundwater at the Site. A source could not be identified based on the contamination distribution. There is the potential for higher concentrations of these contaminants to be elsewhere on Site and so a further contaminated land assessment, including soil vapour assessment, should be undertaken after site demolition and removal of the potential contamination sources and prior to site redevelopment.

10 CONCLUSIONS

Charter Hall commissioned WSP to undertake a Phase I and II Due Diligence Assessment to assess the contamination in soil, environmental planning and environmental compliance status of the Site and support decision making with regards to a proposed acquisition and redevelopment. WSP understand the proposed redevelopment comprises a warehouse with ancillary offices, loading dock and car parking.

In the current manufacturing area (western portion of the Site warehouse), housekeeping was observed to be good at the time of the inspection. However, in the former manufacturing area (eastern portion of the Site warehouse), housekeeping was observed to be average at the time of inspection, with staining of hardstand and leaks and spills observed surrounding the formaldehyde tanks and former WWTP footprint. Cracks were noted in the concrete of the former WWTP base. Concrete hardstand elsewhere on Site was noted to be in an acceptable condition.

The investigation identified that the Site is underlain by fill comprising gravelly sandy clay, clayey sand and silty clay with fine to coarse angular gravels to a maximum depth of 1.3 mBGL. The fill was underlain by natural clay to a maximum depth of 6.0 mBGL, underlain by weathered shale and shale to the maximum investigation depth of 10.0 mBGL.

No contaminants of concern in soil were at concentrations above the human health adopted investigation criteria for commercial/industrial land use. Concentrations of nickel were above the ecological adopted investigation criteria for commercial/industrial land use, however, these concentrations are not considered to present a risk as no stressed vegetation was noted on Site and the Site will continue to be used as a commercial/industrial facility with minor areas of vegetation.

Minor concentrations of TRH, total creosol, total phenol fenitrothion and methyl parathion were detected during laboratory analysis. These could be attributed to the former or current site activities, however, they are not considered to present a risk to future site users as they will not come into contact with the subsurface soil due to the presence of hardstand across the Site. Contact with soil during construction can be managed by implementation of a CEMP.

Shallow soils are generally non- to moderately saline. Salinity on the Site appears to generally increase with depth. During intrusive investigation no evidence of shallow groundwater (<1m) was observed. Deeper structures (including footings, piles and service trenches) extending into the shale lithology should have salinity resistant materials incorporated into their design. Based on the results from this preliminary investigation salinity does not present a significant risk of corrosion to shallow structures. To minimise the impact of the water and salt processes on the development, possible management options may include careful installation of damp-proof courses and good site drainage.

Soils tested on the Site were generally sodic in nature. Sodic soils present an elevated erosion hazard on-site. Development works should be planned to accommodate for the elevated potential for erosion and sediment generation in runoff and the final development should ensure adequate protection of soils (e.g. through maintenance of vegetation coverage).

No contaminants of concern in groundwater were at concentrations above the adopted assessment criteria for freshwater with the exception of concentrations of cadmium, copper, nickel and zinc. Concentrations of copper, nickel and zinc above the adopted assessment criteria for the protection of freshwater are likely reflective of background concentrations. Concentration of cadmium above the adopted assessment criteria for the protection of freshwater are potentially related to the industrial nature of the larger area that the Site is located within.

MEK, MIBK, acetone, bis(2-ethylhexyl) phthalate and di-n-butyl phthalate detected in the groundwater at the Site. The former or current operations of the Site are potentially the source of these contaminants. There is the potential for higher concentrations of these contaminants to be elsewhere on Site and so a further contaminated land assessment, including soil vapour assessment, should be undertaken after site demolition and removal of the potential contamination sources and prior to site redevelopment.

Further investigations may be warranted if the proposed future land-use scenario changes for the Site.

11 LIMITATIONS

This Report is provided by WSP Australia Pty Limited (WSP) for Charter Hall Holdings Pty Ltd (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 12 August 2021 and agreement with the Client dated 13 August 2021 (Agreement).

PERMITTED PURPOSE

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Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (Conclusions) are based in whole or in part on information provided by the Client and other parties identified in the report (Information), those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

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12 REFERENCES

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APPENDIX A

SITE FIGURES





Legend

 Site boundary

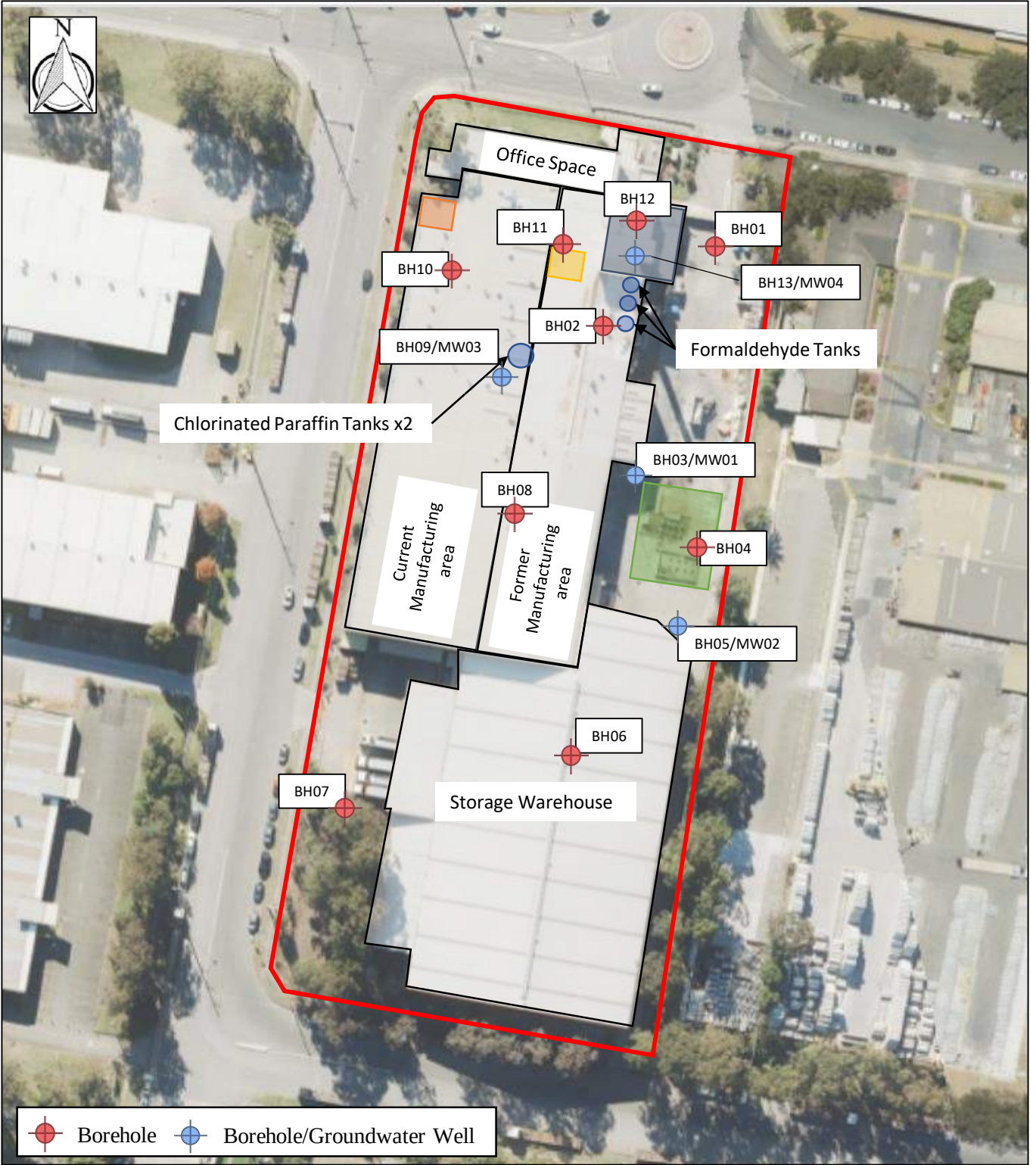
Figure 1 – Site location and regional context



Legend

	Site Boundary		Former Waste Water Treatment Plant
	Above-Ground Storage Tank		Former Transformer Footprint
	Dangerous Goods Storage Area		Furnace and Pit Area

Figure 2 –
Site layout



Legend

	Site Boundary		Former Waste Water Treatment Plant
	Above-Ground Storage Tank		Former Transformer Footprint
	Dangerous Goods Storage Area		Furnace and Pit Area

Figure 3 –
 Sampling locations

APPENDIX B

ANALYTICAL RESULTS TABLES



Table 1
Soil analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	Soil Properties			NA		TRH							BTEX					
	Conductivity (1:5 aqueous extract)	Exchangeable Sodium Percent	pH (aqueous extract)	Benzal Chloride	Benzotrithioride	C6 - C10	C6 - C10 less BTEX (F1)	C10 - C16	C10 - C16 less Naphthalene (F2)	C16 - C34	C34 - C40	C10 - C40 (Sum)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene (Sum)
EQL	µs/cm	%	pH Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	10	1	0.1	0.05	0.05	10	10	50	50	100	100	50	0.1	0.1	0.1	0.2	0.1	0.3
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																		
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																		
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																		
0-1m							260 ^{#14}		NL ^{#15}				3	NL ^{#15}	NL ^{#15}			230
1-2m							370 ^{#14}		NL ^{#15}				3	NL ^{#15}	NL ^{#15}			NL ^{#15}
2-4m							630 ^{#14}		NL ^{#15}				3	NL ^{#15}	NL ^{#15}			NL ^{#15}
>=4m							NL ^{#15}		NL ^{#15}				3	NL ^{#15}	NL ^{#15}			NL ^{#15}
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil, 0 - 2m							215 ^{#14}	170		1,700	3,300		75	135	165			180
CRC Care 2011 Table B4 Intrusive Maintenance Worker (Direct Contact)							82,000	62,000		85,000	120,000		1,100	120,000	85,000			130,000
CRC Care 2011 Table B3 Intrusive Workers (Shallow Trench) 0 to <2m - SAND													77					

Field ID	Date	Matrix Type																
BH01-0.2	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH01-2.0	16/08/2021	soil	460	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01-5.0	16/08/2021	soil	100	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.3	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH02-0.5	16/08/2021	soil	190	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.15	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH03-0.3	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH03-0.5	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH03-3.0	16/08/2021	soil	360	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03-8.0	16/08/2021	soil	230	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04-0.5	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	180	300	<0.1	<0.1	<0.1	<0.2	<0.3
BH04-2.0	16/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH05-0.2	16/08/2021	soil	200	-	8.2	-	-	<20	<20	<50	<50	190	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH05-0.5	16/08/2021	soil	200	-	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-3.0	16/08/2021	soil	420	-	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-5.0	16/08/2021	soil	730	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06-0.2	18/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH07-0.1	17/08/2021	soil	52	-	8.1	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH07-0.5	17/08/2021	soil	150	-	6.3	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-3.0	17/08/2021	soil	920	-	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-5.0	17/08/2021	soil	1,000	-	6.5	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8-0.2	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH9-0.1	17/08/2021	soil	-	-	-	<0.05	<0.05	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH9-0.3	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH9-1.0	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
QA02	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
QA02A	17/08/2021	soil	-	-	-	-	-	<10	<10	<50	<50	<100	<100	<0.2	<0.5	<0.5	<0.5	<0.5
BH10-0.3	18/08/2021	soil	-	-	-	<0.05	<0.05	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH11-0.2	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH12-0.3	18/08/2021	soil	-	-	-	<0.05	<0.05	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH12-2.0	18/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH13-0.3	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH13-0.5	17/08/2021	soil	130	-	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-1.0	17/08/2021	soil	120	-	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-2.0	17/08/2021	soil	-	-	-	-	-	<20	<20	<50	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.3
BH13-4.0	17/08/2021	soil	390	-	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-7.0	17/08/2021	soil	710	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments

- #1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
- #2 As Chromium III. Generic ACL value from NEPM 2013 Table 1B(3) using a clay content of 1%. The ACL should be adjusted based on site-specific Clay content (when available). To calculate a site specific EIL, add the ABC to the ACL.
- #3 Generic ACL value from NEPM 2013 Table 1B(2) using a soil pH of 4.5. The ACL should be adjusted based on site-specific pH or CEC (when available). To calculate a site specific EIL, add the ABC to the ACL.
- #4 Generic ACL value from NEPM 2013 Table 1B(4). To calculate a site specific EIL, add the added background concentration (ABC) to this value.
- #5 Generic ACL value from NEPM 2013 Table 1B(3) using a CEC of 5 meq/100g. The ACL should be adjusted based on site-specific CEC (when available). To calculate a site specific EIL, add the added background concentration (ABC) to the ACL.
- #6 Generic ACL value from NEPM 2013 Table 1B(1) using a soil pH of 4.0 and a CEC of 5 meq/100g. The ACL should be adjusted based on site-specific pH and CEC (when available). To calculate a site specific EIL, add the ABC to the ACL.
- #7 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (ref to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sample by its BaP TEF (ref Table 1A(1)) & summing
- #8 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider presence of carcinogenic PAHs (should meet BaP TEQ HIL) & naphthalene (should meet relevant HSL)
- #9 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Schedule B7).
- #10 As Chromium VI
- #11 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability should be considered where appropriate.
- #12 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspected to be present.
- #13 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (inc dioxin like PCBs) should be undertaken
- #14 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
- #15 Derived soil HSL exceeds soil saturation concentration
- #16 Nil
- ND - Not detected

Table 1

EOL
NEPM 2013 Table 18(5) Generic EIL - Comm/Ind
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand
0-1m
1-2m
2-4m
>4m
NEPM 2013 Table 18(6) ESLs for Comm/Ind. Coarse Soil, 0 - 2m
CRC Care 2011 Table 84 Intrusive Maintenance Worker (Direct Contact)
CRC Care 2011 Table 83 Intrusive Workers (Shallow Trench) 0 to <2m - SAND

BH01-0.2	16/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	12	<0.4	39	27	16	<0.1	31	32	-	-
BH01-2.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01-5.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.3	16/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.4	34	42	<5	<0.1	68	51	-	-
BH02-0.5	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.15	16/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.0	<0.4	28	43	<5	<0.1	66	44	<0.5	<0.5
BH03-0.3	16/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.6	<0.4	23	28	14	<0.1	24	64	<0.5	<0.5
BH03-0.5	16/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10	<0.4	30	24	15	<0.1	24	43	-	-
BH03-3.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03-8.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04-0.5	16/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	9.0	6.1	<5	<0.1	5.9	26	<0.5	<0.5
BH04-2.0	16/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.6	<0.4	21	16	9.8	<0.1	<5	21	-	-
BH05-0.2	16/08/2021	soil	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.4	13	<5	11	<0.1	<5	24	-	-
BH05-0.5	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-3.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-5.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06-0.2	16/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	13	<0.4	23	48	23	<0.1	21	78	-	-
BH07-0.1	17/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.4	39	29	30	<0.1	14	110	-	-
BH07-0.5	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-3.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-5.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8-0.2	17/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.4	13	6.8	7.1	<0.1	<5	19	-	-
BH9-0.1	17/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	29	66	<5	<0.1	64	85	<0.5	<0.5
BH9-0.3	17/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.4	18	20	6.9	<0.1	7.6	16	-	-
BH9-1.0	17/08/2021	soil	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	13	9.4	6.2	<0.1	<5	9.0	-	-
QA02	17/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	7.0	7.2	<5	<0.1	<5	7.1	<0.5	<0.5
QA02A	17/08/2021	soil	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<5	<1	7	8	<5	<0.1	<2	6	-	-
BH10-0.3	18/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	5.7	11	<5	<0.1	<5	16	<0.5	<0.5
BH11-0.2	17/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	43	65	<5	<0.1	120	70	<0.5	<0.5
BH12-0.3	18/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	14	9.3	5.4	<0.1	8.9	13	<0.5	<0.5
BH12-2.0	18/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.5	<0.4	17	13	11	<0.1	16	18	-	-
BH13-0.3	17/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	<0.4	32	23	9.1	<0.1	27	26	<0.5	<0.5
BH13-0.5	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-1.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-2.0	17/08/2021	soil	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.2	<0.4	21	18	15	<0.1	<5	11	-	-
BH13-4.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-7.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule E

#2 As Chromium III. Generic ACL value from NEMP 2013 Table 18(3) using a clay content

#3 Generic ACL value from NEMP 2013 Table 18(2) using a pH of 4.5. The ACL should

#4 Generic ACL value from NEMP 2013 Table 18(4). To calculate a site specific IEL, add the

#5 Generic ACL value from NEMP 2013 Table 18(3) using a CEC of 5 meq/100g. The ACL of

#6 Generic ACL value from NEMP 2013 Table 18(1) using a pH of 4.0 and a CEC of 5

#7 Carcinogenic PAHs: HIL based on 8 carcin. PAHs & their TEFs (RfD BaP Ref Schedule 7)

#8 PCBs: Based on sum of 16 most common reported WHO SaP. HIL application sh

#9 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe imp

#10 As Chromium VI

#11 Lead: HILs A,B,C based on blood lead models (EUBK & HIL D on adult lead model for

#12 Elemental mercury: HIL does not address elemental mercury, a site specific assessm

#13 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or susp

#14 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

#15 Derived soil HILs exceeds soil saturation concentration

#16 Nil

ND - Not detected

[illegible]

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Comments

#1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B.

#2 As Chromium III. Generic ALC value from NEMP 2013 Table 18(3) using a clay content

#3 Generic ALC value from NEMP 2013 Table 18(2) using a soil pH of 4.5. The ALC should

#4 be calculated from NEMP 2013 Table 18(4). To calculate a site specific EIL, add the

#5 Generic ALC value from NEMP 2013 Table 18(3) using a CEC of 5 meq/100g. The ALC of

#6 Generic ALC value from NEMP 2013 Table 18(1) using a soil pH of 4.0 and a CEC of 5

#7 Carcinogenic PAHs: HIL based on 8 car. PAHs and their TEFs (ref to BaP ref Schedule 7)

#8 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application sh

#9 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe impor

#10 As Chromium VI

#11 Lead: HILs A,B,C based on blood lead levels (UEHR & HIL D on adult lead model for

#12 Elemental mercury: HIL does not address elemental mercury, a site specific assessm

#13 HIL refers to arsenic ineline PCBs only. Where PCB source is known, or suspecte

#14 To derive total HSL subtract the sum of BTEX concentrations from the C6 - C10 fraction

#15 Derived Soil HIL exceeds soil saturation concentration

#16 Nil

ND - Not detected

[illegible]

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Table 1
Soil analysis results
600 Woodstock Avenue, Rooty Hill,
Charter Hall

	Dibenz(a,h)acridine	Dibenzofuran	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Methapyrillene	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosodiphenyl & Diphenylamine	N-Nitrosomethylethylamine	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Pentachlorobenzene	Pentachloronitrobenzene	Phenacetin	Pronamide	Trifluralin
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																									
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																									
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																									
0-1m																									
1-2m																									
2-4m																									
>=4m																									
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil, 0 - 2m																									
CRC Care 2011 Table B4 Intrusive Maintenance Worker (Direct Contact)																									
CRC Care 2011 Table B3 Intrusive Workers (Shallow Trench) 0 to <2m - SAND																									

Field ID	Date	Matrix Type																						
BH01-0.2	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01-2.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01-5.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.3	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.5	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02-0.15	16/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH03-0.3	16/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH03-0.5	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03-3.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03-8.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04-0.5	16/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH04-2.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-0.2	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-0.5	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-3.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05-5.0	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06-0.2	16/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-0.1	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-0.5	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-3.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07-5.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH8-0.2	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9-0.1	17/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH9-0.3	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH9-1.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	17/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
QA02A	17/08/2021	soil	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	-
BH10-0.3	18/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH11-0.2	17/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH12-0.3	18/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH12-2.0	18/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-0.3	17/08/2021	soil	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	-	-	<0.5	<0.5	-	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
BH13-0.5	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-1.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-2.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-4.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13-7.0	17/08/2021	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments

#1 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B

#2 As Chromium III. Generic ACL value from NEPM 2013 Table 1B(3) using a clay content

#3 Generic ACL value from NEPM 2013 Table 1B(2) using a soil pH of 4.5. The ACL should

#4 Generic ACL value from NEPM 2013 Table 1B(4). To calculate a site specific EIL, add th

#5 Generic ACL value from NEPM 2013 Table 1B(3) using a CEC of 5 meq/100g. The ACL s

#6 Generic ACL value from NEPM 2013 Table 1B(1) using a soil pH of 4.0 and a CEC of 5 m

#7 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (ref to BaP ref Schedule 7) I

#8 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application shi

#9 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe impor

#10 As Chromium VI

#11 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for

#12 Elemental mercury: HIL does not address elemental mercury. a site specific assessme

#13 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspect

#14 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

#15 Derived soil HSL exceeds soil saturation concentration

#16 Nil

ND - Not detected

[illegible]

7 of 50

[illegible]

8 of 50

Table 2
Groundwater gauging data
600 Woodstock Avenue, Rooty Hill
Charter Hall

Well ID	Gauging Date	Well Depth (mBTC)	Depth to Water (mBTC)	Depth to Product (mBTC)	Apparent LNAPL Thickness (m)
MW01	20/08/2021	9.00	5.805	-	-
MW02	20/08/2021	9.00	7.467	-	-
MW03	20/08/2021	10.00	7.385	-	-
MW04	20/08/2021	10.00	4.358	-	-

mBTC = metres below top of casing

Table 3
Groundwater quality parameters
600 Woodstock Avenue, Rooty Hill
Charter Hall

Well ID	Sampling Date	pH	Conductivity	Redox	Dissolved Oxygen	Temperature
			($\mu\text{S}/\text{cm}$)	(mV)	(ppm)	($^{\circ}\text{C}$)
MW01	20/08/2021	6.87	33,051	148.7	3.07	20.8
MW02	20/08/2021	6.83	30,856	156.2	3.75	19.1
MW03	20/08/2021	6.92	37,785	84.6	3.50	21.0
MW04	20/08/2021	6.39	27,512	122.1	4.23	20.4

(1) Redox potential values collected in the field have been corrected to standard hydrogen electrode values by adding 199 mV to each reading

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

NA		TRH							BTEX					
Benzal Chloride	Benzotrithloride	C6 - C10	C6 - C10 less BTEX (F1)	C10 - C16	C10 - C16 less Naphthalene (F2)	C16 - C34	C34 - C40	C10 - C40 (Sum)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene (Sum)
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EOL	0.1	0.1	20	20	50	50	100	100	1	1	1	2	1	2
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs									950 ^{#1}	180 ^{#2}	80 ^{#2}		350 ^{#3}	
INPEM 2013 Table 1C GILs, Drinking Water									1	800	300			600

Field ID	Date	Matrix Type															
MW01	20/08/2021	water	<0.1	<0.1	<20	<20	<50	<50	<100	<100	<100	<1	<1	<1	<2	<1	<3
QA01	20/08/2021	water	<0.1	<0.1	<20	<20	<50	<50	<100	<100	<100	<1	<1	<1	<2	<1	<3
QA01A	20/08/2021	water	-	-	<20	<20	<100	<100	<100	<100	<100	<1	<2	<2	<2	<2	<2
MW02	20/08/2021	water	<0.1	<0.1	<20	<20	<50	<50	<100	<100	<100	<1	<1	<1	<2	<1	<3
MW03	20/08/2021	water	<0.1	<0.1	<20	<20	<50	<50	<100	<100	<100	<1	<1	<1	<2	<1	<3
MW04	20/08/2021	water	<0.1	<0.1	<20	<20	<50	<50	<100	<100	<100	<1	<1	<1	<2	<1	<3

Comments

#1 Moderate reliability

#2 Unknown reliability. Recommended for application for slightly to moderately disturbed ecosystems.

#3 Low reliability

#4 Unknown reliability

#5 Very high reliability

#6 High reliability

#7 Moderate reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.

#8 Moderate reliability. DGV may not protect key test species from acute (and chronic) toxicity. Check toxicant DGV technical brief for spread of data and its significance. This DGV is greater than the value for acute toxicity (Warne et al., 2018).

#9 Low reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.

#10 Very Low reliability

#11 Values calculated using hardness of 30 mg/L CaCO3. Refer ANZECC & ARMCANZ (2000) for site specific hardness guidance

* - The detection limits are higher than one or more of the adopted criteria

Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

		PAH																					
		2-(acetylamino) fluorene	2-methylnaphthalene	3-methylcholanthrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b+g)fluoranthene	Benzo(a) pyrene	Benzo(b&g)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum)	Pyrene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		2	2	2	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	2	2	1
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs							0.4 nd			0.2 nd						1.4 nd			16 nd	2 nd			
NEPM 2013 Table 1C GILs, Drinking Water										0.01													

Field ID	Date	Matrix Type																						
MW01	20/08/2021	water	-	<5	<5	<1	<1	<1*	<1	-	<1*	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1		
QA01	20/08/2021	water	-	<5	<5	<1	<1	<1*	<1	-	<1*	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1		
QA01A	20/08/2021	water	<2	<2	<2	<2	<2	<2*	<2	<4	<2*	-	<2	-	<2	<2*	<2	<2	<2	<2	<2	<2		
MW02	20/08/2021	water	-	<5	<5	<1	<1	<1*	<1	-	<1*	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1		
MW03	20/08/2021	water	-	<5	<5	<1	<1	<1*	<1	-	<1*	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1		
MW04	20/08/2021	water	-	<5	<5	<1	<1	<1*	<1	-	<1*	<1	<1	<1	<1	<1	<1	<1	<1	-	-	<1		

Comments

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#2 Unknown reliability. Recommended for application for slightly to moderately dis

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#4 Unknown reliability

#5 Very high reliability

#6 High reliability

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#9 Low reliability. DGV may not protect key test species from chronic toxicity (this re

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#11 Values calculated using hardness of 30 mg/L CaCO3. Refer ANZECC & ARMCAN2

* - The detection limits are higher than one or more of the adopted criteria

Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	Metals								IWRG Combined		Explosives				
	Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Chlorinated hydrocarbons	Other chlorinated hydrocarbons	1,3,5-Trinitrobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	Formaldehyde
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	-	mg/L	mg/L	mg/L	mg/L	µg/L
EOL	1	0.1	1	1	1	0.1	1	5	0.005	0.005	0.002	0.004	0.004	0.002	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs		0.2 ^{#5}		1.4 ^{#5}	3.4 ^{#2}	0.6 ^{#3}	11 ^{#3}	8 ^{#6}				0.065 ^{#7}		0.55 ^{#3}	
INPEM 2013 Table 1C GILs, Drinking Water	10	2 ^{#11}		2,000 ^{#11}	10 ^{#11}	1	20 ^{#11}								500

Field ID	Date	Matrix Type														
MW01	20/08/2021	water	7	0.7	<1	5	<1	<0.1	25	64	<0.005	<0.005	-	<0.005	<0.005	<0.05
QA01	20/08/2021	water	6	0.8	<1	4	<1	<0.1	27	54	<0.005	<0.005	-	<0.005	<0.005	<0.05
QA01A	20/08/2021	water	6	0.7	<1	6	<1	<0.1	27	54	-	-	<0.002	<0.004	<0.004	<0.002
MW02	20/08/2021	water	12	0.8	<1	3	<1	<0.1	34	37	<0.005	<0.005	-	<0.005	<0.005	<0.05
MW03	20/08/2021	water	8	<0.2	<1	4	<1	<0.1	38	52	<0.005	<0.005	-	<0.005	<0.005	<0.05
MW04	20/08/2021	water	4	2.5	<1	4	<1	<0.1	190	210	<0.005	<0.005	-	<0.005	<0.005	<0.05

Comments

#1 Moderate reliability

#2 Unknown reliability. Recommended for application for slightly to moderately dis

#3 Low reliability

#4 Unknown reliability

#5 Very high reliability

#6 High reliability

#7 Moderate reliability. DGV may not protect key test species from chronic toxicity (

#8 Moderate reliability. DGV may not protect key test species from acute (and chror

#9 Low reliability. DGV may not protect key test species from chronic toxicity (this re

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#11 Values calculated using hardness of 30 mg/L CaCO3. Refer ANZECC & ARMCAN2

* - The detection limits are higher than one or more of the adopted criteria

Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	OCP																				
	4,4'-DDE	α-BHC	Aldrin	Aldrin + Dieldrin	β-BHC	δ-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EOL	2	2	2	4	2	2	2	4	4	2	5	2	2	2	2	5	2	2	2	4	5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs								0.01 ^{#1}							0.02 ^{#1}		0.2 ^{#1}	0.09 ^{#1}		0.1 ^{#4}	
NEPM 2013 Table 1C GILs, Drinking Water				0.3				9									10		0.3		

Field ID	Date	Matrix Type																			
MW01	20/08/2021	water	<5	<5	<5	•	<5	<5	<5	<5*	•	<5	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5
QA01	20/08/2021	water	<5	<5	<5	•	<5	<5	<5	<5*	•	<5	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5
QA01A	20/08/2021	water	<5	<5	<5	<5*	<5	<5	<5	<5*	•	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5*	•
MW02	20/08/2021	water	<5	<5	<5	•	<5	<5	<5	<5*	•	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5*	<5
MW03	20/08/2021	water	<5	<5	<5	•	<5	<5	<5	<5*	•	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5*	<5
MW04	20/08/2021	water	<5	<5	<5	•	<5	<5	<5	<5*	•	<5	<5	<5	<5*	<5	<5*	<5*	<5*	<5*	<5

Comments

#1 Moderate reliability

#2 Unknown reliability. Recommended for application for slightly to moderately dis

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#6 High reliability

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	OPP											PCB		Phenols				
	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimphos-ethyl	Prothiofos	Arochlor 1254	PCBs (Sum of total)	Cresol Total	Pentachlorophenol	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EOL	2	2	2	2	2	2	2	2	2	2	2	5	1	10	2	1	10	100
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs		0.01 ^{#3}		0.01 ^{#1}		0.15 ^{#3}			0.05 ^{#1}			0.03 ^{#1}			10 ^{#1}	320 ^{#1}		
INEPM 2013 Table 1C GILs, Drinking Water	2	10		4	5	7	4	7	70						10			

Field ID	Date	Matrix Type																
MW01	20/08/2021	water	-	-	-	-	-	-	-	-	-	<5*	<5	<10	<10	<3	<10	<100
QA01	20/08/2021	water	-	-	-	-	-	-	-	-	-	<5*	<5	<10	<10	<3	<10	<100
QA01A	20/08/2021	water	<2	<2*	<2	<2*	<2	<2*	<2	<2*	<2	-	<1	-	<2.0	<1.0	-	-
MW02	20/08/2021	water	-	-	-	-	-	-	-	-	-	<5*	<5	<10	<10	<3	<10	<100
MW03	20/08/2021	water	-	-	-	-	-	-	-	-	-	<5*	<5	<10	<10	<3	<10	<100
MW04	20/08/2021	water	-	-	-	-	-	-	-	-	-	<5*	<5	<10	<10	<3	<10	<100

Comments

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,3,5-Trichlorobenzene	1-Chloronaphthalene	1-naphthylamine	2-chloronaphthalene	2-naphthylamine	2-nitroaniline	2-Picoline	3,3-Dichlorobenzidine	3-nitroaniline	4-(dimethylamino) azobenzene	4-aminobiphenyl	4-bromophenyl phenyl ether	4-chloroaniline	4-chlorophenyl phenyl ether	4-nitroaniline	4-Nitroquinoline-N-oxide	5-nitro-o-tolidine	7,12-dimethylbenz(a)anthracene	Acetophenone	Aniline	Azobenzene	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EOL			0.005	0.005	0.005	0.005	0.005	0.002	0.002	0.005	0.004	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.005	0.002	0.002
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs			0.004 ^{#4}	0.005 ^{#4}	0.007 ^{#4}	0.013 ^{#4}																			0.25 ^{#8}					
NEPM 2013 Table 1C GILs, Drinking Water						0.03																								
Field ID	Date	Matrix Type																												
MW01	20/08/2021	water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-
QA01	20/08/2021	water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-
QA01A	20/08/2021	water	-	-	-	-	-	<0.002	<0.002	-	<0.004	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
MW02	20/08/2021	water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-
MW03	20/08/2021	water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-
MW04	20/08/2021	water	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-

Comments

#1 Moderate reliability

#2 Unknown reliability. Recommended for application for slightly to moderately dis

#3 Low reliability

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#11 Values calculated using hardness of 30 mg/L CaCO3. Refer ANZECC & ARMCAN2

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

		SVOC																													
		Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Carbazole	Chlorobenzilate	Dibenz(a,j)acridine	Dibenzofuran	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Methapyrene	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosodiphenyl & Diphenylamine	N-Nitrosomethylethylamine	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Pentachlorobenzene	Pentachloronitrobenzene	Phenacetin	Pronamide	Trifluralin
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL		0.005	0.005	0.002	0.002	0.002	0.005	0.002	0.002	0.002	0.002	0.002	0.005	0.005	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.005
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs									1 ^{#3}	3.7 ^{#3}	0.026 ^{#3}				0.36 ^{#1}												0.002 ^{#4}				0.0044 ^{#1}
NEPM 2013 Table 1C GILs, Drinking Water			0.01																									0.03		0.07	0.09

Field ID	Date	Matrix Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

																														V		
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2,3-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2,4-trichlorobenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-butanone (MEK)	2-chlorotoluene	2-hexanone (MBK)	4-chlorotoluene	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromochloromethane	Bromobenzene	Bromodichloromethane	Bromoform
EQL	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.005	0.001	0.005	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.005	0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs		0.27 ^{#2}	0.4 ^{#2}	6.5 ^{#1}		0.7 ^{#2}			0.01 ^{#3}			0.17 ^{#9}		0.16 ^{#1}	1.9 ^{#2}	0.9 ^{#2}		0.26 ^{#1}	1.1 ^{#2}	0.06 ^{#10}												
NEPM 2013 Table 1C GILs, Drinking Water						0.03			0.03			0.03		1.5	0.003					0.04												

Field ID	Date	Matrix Type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 4
Groundwater analysis results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	BC																															
	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorodibromomethane	Chlorobenzene	Chloroethane	Chloromethane	Chloroform	cis-1,4-Dichloro-2-butene	cis-1,3-dichloropropene	cis-1,2-dichloroethene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Hexachlorobutadiene	Iodomethane	Isopropylbenzene	n-butylbenzene	n-propylbenzene	Pentachloroethane	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-butylbenzene	TCE	Tetrachloroethene	trans-1,4-Dichloro-2-butene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
	EQL	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.001	0.005	0.001	0.001	0.005	0.001	0.001	0.001	0.05
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs			0.24 ^{#2}		0.055 ^{#2}			0.77 ^{#4}						4 ^{#2}			0.03 ^{#2}			0.08 ^{#2}					0.33 ^{#2}	0.07 ^{#2}						0.1 ^{#2}
NEPM 2013 Table 1C GILs, Drinking Water	0.001		0.003		0.3									0.004	0.0007								0.03			0.05						0.0003

Field ID	Date	Matrix Type																														
MW01	20/08/2021	water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005*	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001
QA01	20/08/2021	water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005*	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001
QA01A	20/08/2021	water	<0.05*	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.05	-	<0.002*	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05
MW02	20/08/2021	water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005*	<0.001	<0.001	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001
MW03	20/08/2021	water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005*	<0.001	<0.001	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001
MW04	20/08/2021	water	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005*	<0.001	<0.001	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001

Comments

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Environmental Standards

ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

Table 5
Salinity results summary
600 Woodstock Avenue, Rooty Hill
Charter Hall

Sample ID	Soil type	Depth (mbgl)	Soil Type	Multiplication Factor	pH	Sulfate	Chloride	EC	EC	EC _e	ESP
					pH Units	mg/kg	mg/kg	µS/cm	dS/m	dS/m	%
BH01-2.0	Clay	2.0	Heavy Clay	6	-	100	740	460	0.46	2.8	24.0
BH01-5.0	Shale	5.0	Heavy Clay	6	-	32	30	100	0.1	0.6	16.0
BH02-0.5	Clay	0.5	Heavy Clay	6	-	36	53	190	0.19	1.1	23.0
BH03-3.0	Clay	3.0	Heavy Clay	6	-	190	910	360	0.36	2.2	19.0
BH03-8.0	Shale	8.0	Heavy Clay	6	-	190	790	230	0.23	1.4	36.0
BH05-0.2	Sandy clay (fill)	0.2	Light Clay	8.5	8.2	-	-	200	0.2	1.7	-
BH05-0.5	Sandy clay (fill)	0.5	Light Clay	8.5	7.8	-	-	200	0.2	1.7	-
BH05-3.0	Clay	3.0	Heavy Clay	6	5.6	-	-	420	0.42	2.5	-
BH05-5.0	Shale	5.0	Heavy Clay	6	6.6	-	-	730	0.73	4.4	-
BH07-0.1	Gravelly clay (fill)	0.1	Light Clay	8.5	8.1	-	-	52	0.052	0.4	-
BH07-0.5	Clay	0.5	Heavy Clay	6	6.3	-	-	150	0.15	0.9	-
BH07-3.0	Clay	3.0	Heavy Clay	6	5.3	-	-	920	0.92	5.5	-
BH07-5.0	Clay	5.0	Heavy Clay	6	6.5	-	-	1,000	1	6.0	-
BH13-0.5	Clay	0.5	Heavy Clay	6	8.3	-	-	130	0.13	0.8	-
BH13-1.0	Clay	1.0	Heavy Clay	6	6.1	-	-	120	0.12	0.7	-
BH13-4.0	Clay with some shale	4.0	Heavy Clay	6	5.7	-	-	390	0.39	2.3	-
BH13-7.0	Shale	7.0	Heavy Clay	6	6.6	-	-	710	0.71	4.3	-

Salinity and sodicity ranking based on NSW DLWC (2002), Site Investigations for Urban Salinity

Salinity		Sodicity	
EC _e <2 dS/cm	Non-saline	ESP <5	Non-Sodic
EC _e 2-4 dS/cm	Slightly Saline	ESP 5-15	Sodic
EC _e 4-8 dS/cm	Moderately Saline	ESP >15	Highly Sodic
EC _e 8-16 dS/cm	Very Saline		
EC _e >16 dS/cm	Highly Saline		

				TRH				BTEX				
				B6 - C10	C10- C16	C16- C34	C34- C40	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				10	50	100	100	0.1	0.1	0.1	0.2	0.1
Lab Report Number	Field ID	Matrix Type	Date									
818308	BH9-1.0	soil	17/08/2021	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1
	QA02	soil	17/08/2021	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1
RPD				NC	NC	NC	NC	NC	NC	NC	NC	NC
818308	BH9-1.0	soil	17/08/2021	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1
ES2130432	QA02A	soil	17/08/2021	<20	<50	<100	<100	<0.2	<0.2	<0.2	<0.5	<0.2
RPD				NC	NC	NC	NC	NC	NC	NC	NC	NC

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: (1 - 10 x EQL); 30 (10 - 20 x EQL); 30 (> 20 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 6
Soil RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

					PAH																Metals								Explosives				Formaldehyde			
					2-(acetylamino) fluorene	2-methylnaphthalene	3-methylcholanthrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b,k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	1,3,5-Trinitrobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	Formaldehyde
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.4	2	5	5	0.1	2	5	0.5	0.5	1	0.5	2
Lab Report Number	Field ID	Matrix Type	Date		-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	13	9.4	6.2	<0.1	<5	9.0	-	-	-	-	<10	
818308	BH9-1.0	soil	17/08/2021		-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	7.0	7.2	21	<0.1	<5	7.1	-	<0.5	<1	<0.5	<10	
RPD	QA02	soil	17/08/2021		-	-	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	60	27	21	NC	NC	24	-	-	-	-	NC
818308	BH9-1.0		17/08/2021		-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.4	13	9.4	6.2	<0.1	<5	9.0	-	-	-	-	<10	
ES2130432	QA02A	soil	17/08/2021		<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	<5	<1	7	8	<5	<0.1	<2	6	<0.5	<1.0	<1.0	<0.5	<2
RPD					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NC	NC	60	16	21	NC	NC	40	-	-	-	-	NC	

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any m

				OCP																										
				4,4'-DDE	α-BHC	Aldrin	Aldrin + Dieldrin	β-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	δ-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	γ-BHC (lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				0.05	0.05	0.05	0.05	0.05	50	0.05	0.05	0.05	0.05	0.05	0.05	0.05	50	50	0.05	0.05	0.05	0.05	0.05	50	0.05	0.05	0.05	0.05	0.05	0.5
Lab Report Number	Field ID	Matrix Type	Date																											
818308	BH9-1.0	soil	17/08/2021	<0.05	<0.05	<0.05	<0.05	<0.05	<100	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<50	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	
	QA02	soil	17/08/2021	<0.05	<0.5	<0.05	-	<0.5	-	-	-	<0.5	<0.5	-	<0.5	-	<200	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	
RPD				NC	NC	NC	-	NC	-	-	-	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	-
818308	BH9-1.0	soil	17/08/2021	<0.05	<0.05	<0.05	<0.05	<0.05	<100	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<50	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	
	ES2130432	soil	17/08/2021	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<50	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	
RPD				NC	NC	NC	NC	NC	NC	-	-	NC	NC	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	-

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any m

				OPP																																									
				Azinophos methyl	BoStar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethoprop	Ethion	Fenitrothion	Fensulfotrhion	Fenamiphos	Fenitron	Malathion	Meprophos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimphos-methyl	Pirimphos-ethyl	Pyrazophos	Prothidofos	Romeil	Terbufos	Tetrachlorvinphos	Tokuthion	Trichlorate		
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	2	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.2	0.05	0.05	0.05	0.05	0.05	2	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.05	0.2	0.05	0.2	0.2	0.2	0.2	0.2	0.2
Lab Report Number	Field ID	Matrix Type	Date	<0.2	<0.2	-	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
818308	BH9-1.0	soil	17/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
QA02		soil	17/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
818308	BH9-1.0	soil	17/08/2021	<0.2	<0.2	-	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
ES2130432	QA02A	soil	17/08/2021	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD				-	-	-	-	NC	NC	NC	-	-	-	-	NC	NC	NC	-	-	-	NC	-	-	NC	NC	-	NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any m

[illegible]

#1 Nil
NC - not calculated

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Comments
 #1 Nil
 NC - not calculated

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 **Elevated RPDs are highlighted as per QA/QC Profile settings (Acceptable RPDs for each EQL multiplier range
 ***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any m

				VOC																																									
				1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2,3-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2,4-trichlorobenzene	1,2-dibromooethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-butanone (MEK)	2-chlorotoluene	2-hexanone (MBK)	4-chlorotoluene	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromochloromethane	Bromobenzene	Bromodichloromethane	Bromofom	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobromomethane	Chlorobenzene	Chloroethane	Chloromethane	Chloroform		
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lab Report Number	Field ID	Matrix Type	Date																																										
818308	BH9-1.0	soil	17/08/2021																																										
	QA02	soil	17/08/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
RPD																																													
818308	BH9-1.0	soil	17/08/2021																																										
ES2130432	QA02A	soil	17/08/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
RPD																																													

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
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	is-1,4-Dichloro-2-butene	is-1,3-dichloropropene	is-1,2-dichloroethene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Hexachlorobutadiene	Iodomethane	Isopropylbenzene	n-butylbenzene	n-propylbenzene	Pentachloroethane	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-butylbenzene	TCE	Tetrachloroethene	trans-1,4-Dichloro-2-butene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
EQL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	s	mg/kg
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	s	0.5
Lab Report Number	Field ID	Matrix Type	Date																					
818308	BH9-1.0	soil	17/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA02	soil	17/08/2021	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
818308	BH9-1.0	soil	17/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ES2130432	QA02A	soil	17/08/2021	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil
NC - not calculated

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
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Table 7
Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	NA		TRH				BTEX				
	Benzal Chloride	Benzotrifluoride	C6 - C10	C10 - C16	C16 - C34	C34 - C40	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.1	0.1	20	50	100	100	1	1	1	2	1

Lab Report Number	Field ID	Matrix Type	Date											
819034	MW01	water	20/08/2021	<0.1	<0.1	<20	<50	<100	<100	<1	<1	<1	<2	<1
	QA01	water	20/08/2021	<0.1	<0.1	<20	<50	<100	<100	<1	<1	<1	<2	<1
RPD				NC	NC	NC	NC	NC	NC	-	NC	NC	NC	NC
819034	MW01	water	20/08/2021	<0.1	<0.1	<20	<50	<100	<100	<1	<1	<1	<2	<1
ES2130773	QA01A	water	20/08/2021	-	-	<20	<100	<100	<100	<1	<2	<2	<2	<2
RPD				-	-	-	-	-	NC	-	NC	NC	NC	NC

NC - not calculated
*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: (1 - 10 x EQL); 30 (10 - 20 x EQL); 30 (> 20 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Table 7
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600 Woodstock Avenue, Rooty Hill
Charter Hall

				PAH																			
				2-(acetylamino) fluorene	2-methylnaphthalene	3-methylcholanthrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b+h)fluoranthene	Benzo(a) pyrene	Benzo(b&j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				2	2	2	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1
Lab Report Number	Field ID	Matrix Type	Date																				
819034	MW01	water	20/08/2021	-	<5	<5	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
	QA01	water	20/08/2021	-	<5	<5	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
RPD				-	NC	NC	NC	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
819034	MW01	water	20/08/2021	-	<5	<5	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
ES2130773	QA01A	water	20/08/2021	<2	<2	<2	<2	<2	<2	<2	-	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	
RPD				-	NC	NC	NC	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	

NC - not calculated
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EQL	Metals								Explosives				Formaldehyde
	Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	1,3,5-Trinitrobenzene	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	Formaldehyde
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	µg/L
EQL	1	0.1	1	1	1	0.1	1	5	0.002	0.004	0.004	0.002	100

Lab Report Number	Field ID	Matrix Type	Date													
819034	MW01	water	20/08/2021	7	0.7	<1	5	<1	<0.1	25	64	-	<0.005	<0.005	<0.05	<200
	QA01	water	20/08/2021	6	0.8	<1	4	<1	<0.1	27	54	-	<0.005	<0.005	<0.05	<200
RPD				15	13	-	22	-	-	8	17	-	NC	NC	NC	NC
819034	MW01	water	20/08/2021	7	0.7	<1	5	<1	<0.1	25	64	-	<0.005	<0.005	<0.05	<200
	ES2130773	QA01A	20/08/2021	6	0.7	<1	6	<1	<0.1	27	54	<0.002	<0.004	<0.004	<0.002	<100
RPD				15	0	-	18	-	-	8	17	-	NC	NC	NC	NC

NC - not calculated
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Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

				OCP																			
				4,4-DDE	α-BHC	Aldrin	β-BHC	δ-BHC	DDD	DDT	Dieldrin	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
EQL				2	2	2	2	2	2	4	2	5	2	2	2	2	5	2	2	2	2	4	5
Lab Report Number	Field ID	Matrix Type	Date																				
819034	MW01	water	20/08/2021	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
	QA01	water	20/08/2021	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
RPD				NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
819034	MW01	water	20/08/2021	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
ES2130773	QA01A	water	20/08/2021	<2	<2	<2	<2	<2	<2	<4	<2	-	<2	<2	<2	<2	-	<2	<2	<2	<4	-	
RPD				NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	-	

NC - not calculated
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Table 7
Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

				OPP											PCB	Phenols			
				Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimphos-ethyl	Prothiofos		Arochlor 1254	2,3,4,6-tetrachlorophenol	Cresol Total	Phenol
EQL				2	2	2	2	2	2	2	2	2	2	2	5	10	10	1	
Lab Report Number	Field ID	Matrix Type	Date																
819034	MW01	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	<5	<10	<10	<3	
	QA01	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	<5	<10	<10	<3	
RPD				-	-	-	-	-	-	-	-	-	-	-	NC	NC	NC	NC	
819034	MW01	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	<5	<10	<10	<3	
ES2130773	QA01A	water	20/08/2021	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	<1.0	
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	NC	

NC - not calculated
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600 Woodstock Avenue, Rooty Hill
Charter Hall

				1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,3,5-Trichlorobenzene	1-Chloronaphthalene	1-naphthylamine	2-chloronaphthalene	2-naphthylamine	2-nitroaniline	2-Picoline	3,3-Dichlorobenzidine	3-nitroaniline	4-(dimethylamino) azobenzene	4-aminobiphenyl	4-bromophenyl phenyl ether	4-chloroaniline	4-chlorophenyl phenyl ether	4-nitroaniline	4-Nitroquinoline-N-oxide	5-nitro-o-toluidine
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.005	0.005	0.005	0.005	0.005	0.002	0.002	0.005	0.004	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Lab Report Number	Field ID	Matrix Type	Date																				
819034	MW01	water	20/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-
	QA01	water	20/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-
RPD				NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	-	NC	NC	NC	-	NC	-	-	-
819034	MW01	water	20/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	-	<0.005	-	-	-
ES2130773	QA01A	water	20/08/2021	-	-	-	-	-	<0.002	<0.002	-	<0.004	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
RPD				-	-	-	-	-	NC	NC	-	NC	NC	NC	-	NC	NC	NC	-	NC	-	-	-

NC - not calculated
*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any me

Table 7
Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

				SVOC																		
				7,12-dimethylbenz(a)anthracene	Acetophenone	Aniline	Azobenzene	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroethyl)ether	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Carbazole	Chlorobenzilate	Dibenz(a.)acridine	Dibenzofuran	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine
EQL				0.002	0.002	0.002	0.002	0.005	0.002	0.002	0.005	0.005	0.002	0.002	0.002	0.005	0.002	0.002	0.002	0.002	0.005	
Lab Report Number	Field ID	Matrix Type	Date																			
819034	MW01	water	20/08/2021	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	0.008	<0.005	-	-	<0.005	<0.005	<0.005	<0.005	0.010	<0.005	<0.005
	QA01	water	20/08/2021	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	0.006	<0.005	-	-	<0.005	<0.005	<0.005	<0.005	0.008	<0.005	<0.005
RPD				NC	NC	NC	-	NC	NC	-	NC	29	NC	-	-	NC	NC	NC	NC	22	NC	NC
819034	MW01	water	20/08/2021	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	<0.005	0.008	<0.005	-	-	<0.005	<0.005	<0.005	<0.005	0.010	<0.005	<0.005
ES2130773	QA01A	water	20/08/2021	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	-
RPD				NC	NC	NC	-	-	NC	-	-	-	NC	-	-	-	NC	NC	NC	-	NC	-

NC - not calculated
*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
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Table 7
Groundwater RPD results
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				Hexachlorocyclopentadiene	Hexachloroethane	Hexachloropropene	Isophorone	Methapyrilene	N-nitrosodiethylamine	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-Nitrosodiphenyl & Diphenylamine	N-Nitrosomethylethylamine	N-nitrosomorpholine	N-nitrosopiperidine	N-nitrosopyrrolidine	Pentachlorobenzene	Pentachloronitrobenzene	Phenacetin	Pronamide	Trifluralin	
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.005	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.004	0.002	0.002	0.002	0.002	0.005
Lab Report Number	Field ID	Matrix Type	Date																			
819034	MW01	water	20/08/2021	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	-	-	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	
	QA01	water	20/08/2021	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	-	-	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	
RPD				NC	NC	-	-	-	-	NC	NC	-	-	-	NC	-	NC	NC	-	NC	NC	
819034	MW01	water	20/08/2021	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	-	-	<0.005	-	<0.005	<0.005	-	<0.005	<0.005	
ES2130773	QA01A	water	20/08/2021	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	-	
RPD				NC	NC	-	-	-	-	NC	NC	-	-	-	NC	-	NC	NC	-	NC	-	

Table 7
Groundwater RPD results
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				1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,1,2,3-trichloropropane	1,2,3-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2,4-trichlorobenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-butanone (MEK)	2-chlorotoluene	
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL				0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.005	0.001	0.005	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.005
Lab Report Number	Field ID	Matrix Type	Date																								
819034	MW01	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.005	<0.001	-	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	
	QA01	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.005	<0.001	-	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	
RPD				NC	NC	NC	NC	NC	NC	-	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	-	NC	-	
819034	MW01	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.005	<0.001	-	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	
ES2130773	QA01A	water	20/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.05	<0.005	
RPD				NC	NC	NC	NC	NC	NC	-	NC	NC	NC	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	-	NC	-	

NC - not calculated
*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any me

Table 7
Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

				VOC																						
				2-hexanone (MBK)	4-chlorotoluene	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromochloromethane	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorodibromomethane	Chlorobenzene	Chloroethane	Chloromethane	Chloroform	cis-1,4-Dichloro-2-butene	cis-1,3-dichloropropene	cis-1,2-dichloroethene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.001	0.001	0.001	
Lab Report Number	Field ID	Matrix Type	Date																							
819034	MW01	water	20/08/2021	-	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	
	QA01	water	20/08/2021	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	
RPD				-	NC	NC	67	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	
819034	MW01	water	20/08/2021	-	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	-	<0.001	<0.001	<0.001	<0.001	<0.001	
ES2130773	QA01A	water	20/08/2021	<0.05	<0.005	<0.05	-	-	-	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.05	-	-	
RPD				-	NC	NC	-	-	-	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	-	NC	NC	NC	NC	-	

NC - not calculated
*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any me

Table 7
Groundwater RPD results
600 Woodstock Avenue, Rooty Hill
Charter Hall

				Hexachlorobutadiene	Iodomethane	Isopropylbenzene	n-butylbenzene	n-propylbenzene	Pentachloroethane	p-isopropyltoluene	sec-butylbenzene	Styrene	tert-butylbenzene	TCE	Tetrachloroethene	trans-1,4-Dichloro-2-butene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride	
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
EQL				0.002	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.001	0.005	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.05	0.001
Lab Report Number	Field ID	Matrix Type	Date																			
819034	MW01	water	20/08/2021	<0.005	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	
	QA01	water	20/08/2021	<0.005	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	
RPD				-	NC	NC	-	-	-	-	-	NC	-	NC	NC	-	NC	NC	NC	-	NC	
819034	MW01	water	20/08/2021	<0.005	<0.001	<0.001	-	-	-	-	-	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.001	
ES2130773	QA01A	water	20/08/2021	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05	
RPD				-	NC	NC	-	-	-	-	-	NC	-	NC	NC	-	NC	NC	NC	-	NC	



Table 8
Trip spike and trip blank results (drilling)
600 Woodstock Avenue, Rooty Hill
Charter Hall

PS125811

	Monocyclic Aromatic Hydrocarbo	TRH		BTEX					
		C6 - C10	C6 - C10 less BTEX (F1)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene (Sum)
EQ	0.5	20	20	0.1	0.1	0.1	0.2	0.1	0.3

Sample ID	Matrix Type	Date	Units									
Trip Blank (drilling)	soil	16/08/2021	mg/kg	<0.5	<20	<20	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
Trip Spike (drilling)	soil	16/08/2021	%	74	80	-	83	80	77	77	78	78

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL	Monocyclic Aromatic Hydrocarbo		TRH						BTEX					
	Naphthalene (MAH)													
	10	20	20	20	50	50	100	100	1	1	1	2	1	3

Sample ID	Matrix Type	Date	Units														
RB1 (drilling)	water	16/08/2021	µg/L	<10	-	<20	<20	<50	<50	<100	<100	<1	<1	<1	<2	<1	<3
RB1 (GME)	water	20/08/2021	µg/L	<10	-	<20	<20	<50	<50	<100	<100	<1	<1	<1	<2	<1	<3
TB01 (GME)	water	20/08/2021	µg/L	<10	-	<20	<20	-	-	-	-	<1	<1	<1	<2	<1	<3
TS01 (GME)	water	20/08/2021	%	95	80	-	-	-	-	-	-	110	110	100	110	100	100

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL	PAH																		
	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2-methylnaphthalene	3-methylcholanthrene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b&i)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	

Sample ID	Matrix Type	Date																
RB1 (drilling)	water	16/08/2021	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
RB1 (GME)	water	20/08/2021	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<	<
TB01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TS01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

	Metals								Explosives			Formaldehy de
	Arsenic (filtered)	Cadmium (filtered)	Chromium (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	Formaldehyde
EQL	1	0.2	1	1	1	0.1	1	5	0.005	0.005	0.005	200

Sample ID	Matrix Type	Date												
RB1 (drilling)	water	16/08/2021	<1	<0.2	<1	<1	<1	<0.1	<1	<5	<0.005	<0.005	<0.005	<200
RB1 (GME)	water	20/08/2021	<1	<0.2	<1	4	<1	<0.1	<1	7	<0.005	<0.005	<0.05	<200
TB01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL	OCP																							
	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	
	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	5	

Sample ID	Matrix Type	Date																					
RB1 (drilling)	water	16/08/2021	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<5
RB1 (GME)	water	20/08/2021	5	5	5	.	5	.	5	5	5	.	5	5	5	5	5	5	5	5	5	5	.
TB01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TS01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL																																																														
	OPP																																																													
	2	Azinophos methyl		2	Bolstar (Sulprofos)		20	Chlorfenvinphos		2	Chlorpyrifos		2	Chlorpyrifos-methyl		20	Coumaphos		2	Demeton-O		2	Demeton-S		2	Diazinon		2	Dichlorvos		2	Dimethoate		2	Disulfoton		2	EPN		2	Ethoprop		2	Ethion		2	Fenitrothion		2	Fensulfothion		2	Fenthion		2	Malathion		2	Merphos		2	Methyl parathion

Sample ID	Matrix Type	Date																				
RB1 (drilling)	water	16/08/2021	<2	<2	<20	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
RB1 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TB01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TS01 (GME)	water	20/08/2021	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
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Charter Hall

EQL														PCB		Phenols		
	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimphos-methyl	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate	Arochlor 1254	PCBs (Sum of total)	2,3,4,6-tetrachlorophenol	Cresol Total	Phenol
	2	2	2	20	2	2	20	2	2	2	2	2	2	5	5	10	10	3

Sample ID	Matrix Type	Date																			
RB1 (drilling)	water	16/08/2021	<2	<2	<2	<20	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<5	<1	<10	<10	<3
RB1 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<10	<10	<3
TB01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL																									
	SVOC																								
	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,4,5-tetrachlorobenzene	1,3,5-Trichlorobenzene	1-Chloronaphthalene	1-naphthylamine	2-chloronaphthalene	2-naphthylamine	2-nitroaniline	2-Picoline	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-aminobiphenyl	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	7,12-dimethylbenz(a)anthracene	Acetophenone	Aniline	Benzyl chloride	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Dibenz(a,j)acridine	Dibenzofuran
	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	

Sample ID	Matrix Type	Date																									
RB1 (drilling)	water	16/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
RB1 (GME)	water	20/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
TB01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQL														
	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Diphenylamine	Hexachlorocyclopentadiene	Hexachloroethane	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	N-nitrosopiperidine	Pentachlorobenzene	Pentachloronitrobenzene	Pronamide	Trifluralin
	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005

Sample ID	Matrix Type	Date													
RB1 (drilling)	water	16/08/2021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
RB1 (GME)	water	20/08/2021	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TB01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil

Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

EQ																									
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2,3-trichlorobenzene	1,2,4-trimethylbenzene	1,2,4-trichlorobenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2-butanone (MEK)	4-chlorotoluene	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromochloromethane	Bromobenzene
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	

Sample ID	Matrix Type	Date																							
RB1 (drilling)	water	16/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
RB1 (GME)	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TB01 (GME)	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil



Table 9
Rinsate, trip spike and trip blank results
600 Woodstock Avenue, Rooty Hill
Charter Hall

PS125811

EQ	DC																									
	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorodibromomethane	Chlorobenzene	Chloroethane	Chloromethane	Chloroform	cis-1,3-dichloropropene	cis-1,2-dichloroethene	Dibromomethane	Dichlorodifluoromethane	Dichloromethane	Hexachlorobutadiene	Iodomethane	Isopropylbenzene	Styrene	TCE	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane	Vinyl chloride	
	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	

Sample ID	Matrix Type	Date																								
RB1 (drilling)	water	16/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
RB1 (GME)	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TB01 (GME)	water	20/08/2021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TS01 (GME)	water	20/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
#1 Nil

APPENDIX C

LABORATORY REPORTS





CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Sydney Laboratory

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Perth Laboratory

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Melbourne Laboratory

2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company		WSP Australia Pty Limited		Project No		PS125811		Project Manager		Imogen Powell		Relinquished by		Claire Williamson			
Address		Level 27, 680 George Street Sydney, NSW 2000 Australia		Project Name		Charter Hall, Glendenning Drilling Works		Report Format		PDF + Esdat		Email for Results		19/08/2021			
Contact Name		Imogen Powell		Special Directions										Imogen.Powell@wsp.com and Claire.Williamson@wsp.com			
Phone No		9272 1478		Purchase Order		30071332		Quote ID No									
Analyses		(Note: Where metals are requested, please specify "Total" or "Filtered") SUITE code must be used to attract SUITE pricing.		TRH, BTEXN, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence		8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A		Semi volatile chlorinated hydrocarbons		Exchangable sodium %, chloride, sulfate		TRH and BTEX		8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde		EC and pH	
Containers		Turnaround Time (TAT)		1L Plastic		250mL Plastic		125mL Plastic		200mL Amber Glass		40mL VOA vial		500mL PFAS Bottle		Jar (Glass or HDPE)	
Sample Comments / Dangerous Goods Hazard Warning		Overnight (9am)*		1 Day*		2 Day*		3 Day*		5 Day (26/08/21)		Other ()					
No	Client Sample ID	Sampled Date	Matrix	TRH, BTEXN, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence	8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A	Semi volatile chlorinated hydrocarbons	Exchangable sodium %, chloride, sulfate	TRH and BTEX	8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde	EC and pH							
1	QA01	16.8.21	S														
2	QA01A	16.8.21	S														
3	QA02	17.8.21	S														
4	QA02A	17.8.21	S														
5	QA03	17.8.21	S														
6	QA03A	17.8.21	S														
7	QA04	18.8.21	S														
8	QA04A	18.8.21	S														
9	RB01	18.8.21	W		x												
10	TB01	18.8.21	S					x									
11	TS01	18.8.21	S					x									
12	BH01_0.2	16.8.21	S	x													
13	BH01_0.5	16.8.21	S														
14	BH01_1.0	16.8.21	S														
15	BH01_2.0	16.8.21	S				x										
16	BH01_3.0	16.8.21	S														
17	BH01_4.0	16.8.21	S														
18	BH01_5.0	16.8.21	S				x										
19	BH02_0.15	18.8.21	S		x												
20	BH02_0.3	18.8.21	S	x													
Total Counts				2	2		2	2	2					1	1	1	17 12
Method of Shipment		Courier (#)		Hand Delivered		Postal		Name				Date		Time		Temperature	
Eurofins mgt Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		19/8/21		Time		12:28		4818308	
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		1/1		Time		pm		Report No	

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Sydney Laboratory
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Perth Laboratory
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Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company		WSP Australia Pty Limited		Project No		PS125811		Project Manager		Imogen Powell		Relinquished by		Claire Williamson	
Address		Level 27, 680 George Street Sydney, NSW 2000 Australia		Project Name		Charter Hall, Glendenning Drilling Works		Report Format		PDF + Esdat		Email for Results		19/08/2021 Imogen.Powell@wsp.com and Claire.Williamson@wsp.com	
Contact Name		Imogen Powell		Analyses (Note: Where metals are requested, please specify "Total" or "Filtered") SUITE code must be used to attract SUITE pricing. TRH, BTEXN, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A Semi volatile chlorinated hydrocarbons Exchangeable sodium %, chloride, sulfate TRH and BTEX 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde EC and pH		Containers		Turnaround Time (TAT)		Sample Comments / Dangerous Goods Hazard Warning					
Phone No		9272 1478													
Special Directions															
Purchase Order															
Quote ID No															
No	Client Sample ID	Sampled Date	Matrix												
1	BH02_0.5	18.8.21	S												
2	BH02_1.0	18.8.21	S												
3	BH02_2.0	18.8.21	S												
4	BH03_0.3	17.8.21	S												
5	BH03_0.5	17.8.21	S	x											
6	BH03_1.0	17.8.21	S												
7	BH03_2.0	17.8.21	S												
8	BH03_3.0	17.8.21	S												
9	BH03_4.0	17.8.21	S												
10	BH03_5.0	17.8.21	S												
11	BH03_6.0	17.8.21	S												
12	BH03_7.0	17.8.21	S												
13	BH03_8.0	17.8.21	S												
14	BH03_9.0	17.8.21	S												
15	BH04_0.35	16.8.21	S												
16	BH04_0.5	16.8.21	S		x										
17	BH04_1.0	16.8.21	S												
18	BH04_2.0	16.8.21	S	x											
19	BH05_0.2	16.8.21	S	x											
20	BH05_0.5	16.8.21	S												
Total Counts				3	2		3		2					20	20
Method of Shipment		Courier (#)		Hand Delivered		Postal		Name		Date		Time		Temperature	
Eurofins mgt		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		19/8/21		Time		12:28	
Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		1/1/		Time		pm	

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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Company		WSP Australia Pty Limited		Project No		PS125811		Project Manager		Imogen Powell		Relinquished by		Claire Williamson	
Address		Level 27, 680 George Street Sydney, NSW 2000 Australia		Project Name		Charter Hall, Glendenning Drilling Works		Report Format		PDF + Esdat		Email for Results		19/08/2021	
Contact Name		Imogen Powell		Analysis		(Note: Where metals are requested, please specify "Total" or "Filtered") SUITE code must be used to attract SUITE pricing. TRH, BTEXN, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A Semi volatile chlorinated hydrocarbons Exchangeable sodium %, chloride, sulfate TRH and BTEX 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde EC and pH									
Phone No		9272 1478													
Special Directions															
Purchase Order															
Quote ID No															
No	Client Sample ID	Sampled Date	Matrix	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4684, WA Guide)	Turnaround Time (TAT)			
												Overnight (9am)* 1 Day* 2 Day* 3 Day* 5 Day (26/08/21) Other ()			
												Sample Comments / Dangerous Goods Hazard Warning			
1	BH05_1.0	16.8.21	S								1	1			
2	BH05_2.0	16.8.21	S								1	1			
3	BH05_3.0	16.8.21	S								1	1			
4	BH05_4.0	16.8.21	S								1	1			
5	BH05_5.0	16.8.21	S								1	1			
6	BH05_6.0	16.8.21	S								1	1			
7	BH05_7.0	16.8.21	S								1	1			
8	BH05_8.0	16.8.21	S								1	1			
9	BH05_9.0	16.8.21	S								1	1			
10	BH06_0.2	18.8.21	S	x							1	1			
11	BH06_0.5	18.8.21	S								1	1			
12	BH06_1.0	18.8.21	S								1	1			
13	BH06_2.0	18.8.21	S								1	1			
14	BH07_0.1	17.8.21	S	x							1	1			Preferentially analyse 1 L K1000 is insufficient amount
15	BH07_0.5	17.8.21	S								1	1			
16	BH07_1.0	17.8.21	S								1	1			
17	BH07_2.0	17.8.21	S								1	1			
18	BH07_3.0	17.8.21	S								1	1			
19	BH07_4.0	17.8.21	S								1	1			
20	BH07_5.0	17.8.21	S								1	1			
Total Counts				2								20	20		
Method of Shipment		Courier (#)		Hand Delivered		Postal		Name				Date		Time	
Eurofins mgt		Received By		SYD BNE MEL PER ADL NTL DRW		Signature				Date		19/8/21		Time	
Laboratory Use Only		Received By		SYD BNE MEL PER ADL NTL DRW		Signature				Date		1-1		Time	

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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Melbourne Laboratory

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03 8564 5000 EnviroSampleVic@eurofins.com

Company	WSP Australia Pty Limited			Project No	PS125811				Project Manager	Imogen Powell				Relinquished by	Claire Williamson			
Address	Level 27, 680 George Street Sydney, NSW 2000 Australia			Project Name	Charter Hall, Glendenning Drilling Works				Report Format	PDF + Esdat					19/08/2021			
Contact Name	Imogen Powell			Analyses (Note: Where metals are requested, please specify "Total" or "Filtered") SUITE code must be used to attract SUITE pricing. TRH, BTEXN, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A Semi volatile chlorinated hydrocarbons Exchangeable sodium %, chloride, sulfate TRH and BTEX 8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde EC and pH									Email for Results	Imogen.Powell@wsp.com and Claire.Williamson@wsp.com				
Phone No	9272 1478																	
Special Directions																		
Purchase Order																		
Quote ID No																		
No	Client Sample ID	Sampled Date	Matrix															
1	BH08_0.2	17.8.21	S	x												1	1	
2	BH08_1.0	17.8.21	S													1	1	
3	BH09_0.1	17.8.21	S		x	x										1	1	
4	BH09_0.3	17.8.21	S	x												1	1	
5	BH09_0.5	17.8.21	S													1	1	
6	BH09_1.0	17.8.21	S	x												1	1	
7	BH09_2.0	17.8.21	S													1	1	
8	BH09_3.0	17.8.21	S													1	1	
9	BH09_4.0	17.8.21	S													1	1	
10	BH09_5.0	17.8.21	S													1	1	
11	BH09_6.0	17.8.21	S													1	1	
12	BH09_7.0	17.8.21	S													1	1	
13	BH09_8.0	17.8.21	S													1	1	
14	BH09_9.0	17.8.21	S													1	1	
15	BH09_10.0	17.8.21	S													1	1	
16	BH10_0.3	18.8.21	S		x	x										1	1	
17	BH10_0.5	18.8.21	S													1	1	
18	BH10_1.0	18.8.21	S													1	1	
19	BH10_2.0	18.8.21	S													1	1	
20	BH11_0.2	17.8.21	S	x												1	1	
Total Counts				3	3	2										20	20	
Method of Shipment	Courier (#)	Hand Delivered	Postal	Name					Date	19/8/21				Time	12:28			
Eurofins mgt	Received By			SYD BNE MEL PER ADL NTL DRW	Signature					Date				19/8/21	Time	12:28	Temperature	1.16
Laboratory Use Only	Received By	M.H		SYD BNE MEL PER ADL NTL DRW	Signature					Date				19/8/21	Time	PM	Report No	#818308

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt



CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Sydney Laboratory
Unit F3 BldF, 16 Mars Rd, Lane Cove West, NSW 2096
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1, 21 Smallwood Pl, Murarie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company		WSP Australia Pty Limited		Project No		PS125811		Project Manager		Imogen Powell		Relinquished by		Claire Williamson			
Address		Level 27, 680 George Street Sydney, NSW 2000 Australia		Project Name		Charter Hall, Glendenning Drilling Works		Report Format		PDF + Esdat		Email for Results		19/08/2021			
Contact Name		Imogen Powell		Analyses (Note: Where metals are requested, please specify "Total" or "Filtered" SUITE code must be used to attract SUITE pricing)		asbestos - presence/absence		8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A		Semi volatile chlorinated hydrocarbons		Exchangeable sodium %, chloride, sulfate		TRH and BTEX			
Phone No		9272 1478				8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde		EC and pH									
Special Directions																	
Purchase Order																	
Quote ID No																	
No	Client Sample ID	Sampled Date	Matrix	TRH, BTEX, PAHs, 8 metals, phenols, PCBs, OCP, OPPs, formaldehyde and asbestos - presence/absence	8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde and asbestos P/A	Semi volatile chlorinated hydrocarbons	Exchangeable sodium %, chloride, sulfate	TRH and BTEX	8 heavy metals, TRH, VOCs, SVOCs (incl BTEX, OCP, OPP, PCBs, phenols), formaldehyde	EC and pH							
1	BH11_0.5	17.8.21	S														
2	BH11_1.0	17.8.21	S														
3	BH11_2.0	17.8.21	S														
4	BH12_0.3	18.8.21	S		x	x											
5	BH12_0.5	18.8.21	S														
6	BH12_1.0	18.8.21	S														
7	BH12_2.0	18.8.21	S	x													
8	BH13_0.3	17.8.21	S		x												
9	BH13_0.5	17.8.21	S						x								
10	BH13_1.0	17.8.21	S						x								
11	BH13_2.0	17.8.21	S	x													
12	BH13_3.0	17.8.21	S														
13	BH13_4.0	17.8.21	S						x								
14	BH13_5.0	17.8.21	S														
15	BH13_6.0	17.8.21	S														
16	BH13_7.0	17.8.21	S						x								
17	BH13_8.0	17.8.21	S														
18	BH13_9.0	17.8.21	S														
19	BH13_10.0	17.8.21	S														
Total Counts				2	2	1			4								
Method of Shipment		Courier (#)	Hand Delivered	Postal	Name							Date	Time	Temperature	Report No		
Eurofins mgt		Received By		SYD BNE MEL PER ADL NTL DRW	Signature							Date	19/8/21	Time	12:28	Temperature	17.6
Laboratory Use Only		Received By	M.H	SYD BNE MEL PER ADL NTL DRW	Signature							Date		Time		Report No	#816308

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5

Australia
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Phone : +64 9 526 45 51
IANZ # 1327

Christchurch

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

Sample Receipt Advice

Company name: WSP Australia P/L NSW
Contact name: Imogen Powell
Project name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811
Turnaround time: 5 Day
Date/Time received: Aug 19, 2021 12:28 PM
Eurofins reference: 818308

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 2 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✓ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Four sample jars; QA01A, QA02A, QA03A and QA04A forwarded to ALS.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Imogen Powell - imogen.powell@wsp.com.

Note: A copy of these results will also be delivered to the general WSP Australia P/L NSW email address.

Australia

Melbourne
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ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Sep 1, 2021
Priority: 1 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Exchangeable Sodium Percentage (ESP)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

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Priority: 1 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity/ (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Metals M8	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Total Recoverable Hydrocarbons	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/MOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X			X	X						X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																											
Perth Laboratory - NATA Site # 23736																											
Mayfield Laboratory - NATA Site # 25079																											
External Laboratory																											
10	BH03-8.0	Aug 16, 2021		Soil	S21-Au35661			X						X					X								X
11	BH04-0.5	Aug 16, 2021		Soil	S21-Au35662	X					X						X	X	X		X				X		
12	BH04-2.0	Aug 16, 2021		Soil	S21-Au35663	X					X							X	X				X				
13	BH05-0.2	Aug 16, 2021		Soil	S21-Au35664	X			X		X		X					X	X				X				
14	BH05-0.5	Aug 16, 2021		Soil	S21-Au35665				X				X						X								
15	BH05-3.0	Aug 16, 2021		Soil	S21-Au35666				X				X						X								
16	BH05-5.0	Aug 16, 2021		Soil	S21-Au35667				X				X						X								
17	BH06-0.2	Aug 16, 2021		Soil	S21-Au35668	X					X							X	X				X				
18	BH07-0.1	Aug 16, 2021		Soil	S21-Au35669	X			X		X		X					X	X				X				
19	BH07-0.5	Aug 16, 2021		Soil	S21-Au35670				X				X						X								
20	BH07-3.0	Aug 16, 2021		Soil	S21-Au35671				X				X						X								

Australia

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Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Sep 1, 2021
Priority: 1 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Metals M8	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Total Recoverable Hydrocarbons	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X			X	X						X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																											
Perth Laboratory - NATA Site # 23736																											
Mayfield Laboratory - NATA Site # 25079																											
External Laboratory																											
21	BH07-5.0	Aug 16, 2021		Soil	S21-Au35672				X				X						X								
22	BH8-0.2	Aug 16, 2021		Soil	S21-Au35673	X					X							X	X				X				
23	BH9-0.1	Aug 16, 2021		Soil	S21-Au35674	X					X				X		X	X	X		X				X		
24	BH9-0.3	Aug 16, 2021		Soil	S21-Au35675	X					X							X	X				X				
25	BH9-1.0	Aug 16, 2021		Soil	S21-Au35676	X					X							X	X				X				
26	BH10-0.3	Aug 16, 2021		Soil	S21-Au35677	X									X		X	X	X		X				X		
27	BH11-0.2	Aug 16, 2021		Soil	S21-Au35678	X					X							X	X		X				X		
28	BH12-0.3	Aug 16, 2021		Soil	S21-Au35679	X					X				X		X	X	X		X				X		
29	BH12-2.0	Aug 16, 2021		Soil	S21-Au35680	X					X							X	X				X				
30	BH13-0.3	Aug 16, 2021		Soil	S21-Au35681	X					X							X	X		X				X		
31	BH13-0.5	Aug 16, 2021		Soil	S21-Au35682				X				X						X								

Company Name: WSP Australia P/L NSW
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Received: Aug 19, 2021 12:28 PM
Due: Sep 1, 2021
Priority: 1 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Exchangeable Sodium Percentage (ESP)	BTEXN and Volatile TRH	Eurofins Suite SVV: SYOCMOC	BTEXN and Volatile TRH	Eurofins Suite B7A	Eurofins Suite B6 (filtered metals)	Eurofins Suite B6	Total Recoverable Hydrocarbons	Moisture Set	Eurofins Suite B15	Phenols (Speciated)	Metals M8	Chlorinated Hydrocarbons	Sulphate (as SO4)	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Formaldehyde (free)	Formaldehyde	Conductivity/ (1:5 aqueous extract at 25°C as rec.)	Chloride	Asbestos Absence /Presence	Asbestos - AS4964	
Melbourne Laboratory - NATA Site # 1254						X		X						X	X			X					X	X				
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X
Brisbane Laboratory - NATA Site # 20794																												
Perth Laboratory - NATA Site # 23736																												
Mayfield Laboratory - NATA Site # 25079																												
External Laboratory																												
32	BH13-1.0	Aug 16, 2021		Soil	S21-Au35683									X						X				X				
33	BH13-2.0	Aug 16, 2021		Soil	S21-Au35684	X				X				X	X							X						
34	BH13-4.0	Aug 16, 2021		Soil	S21-Au35685									X						X				X				
35	BH13-7.0	Aug 16, 2021		Soil	S21-Au35686									X						X				X				
36	BH01-5.0	Aug 16, 2021		Soil	S21-Au35687																X							
37	BH01-1.0	Aug 16, 2021		Soil	S21-Au35688																X							
38	BH01-3.0	Aug 16, 2021		Soil	S21-Au35689																X							
39	BH01-4.0	Aug 16, 2021		Soil	S21-Au35690																X							
40	BH02-1.0	Aug 16, 2021		Soil	S21-Au35691																X							
41	BH02-2.0	Aug 16, 2021		Soil	S21-Au35692																X							
42	BH03-1.0	Aug 16, 2021		Soil	S21-Au35693																X							

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Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Exchangeable Sodium Percentage (ESP)	BTEXN and Volatile TRH	Eurofins Suite SVV: SYOCMOC	BTEXN and Volatile TRH	Eurofins Suite B7A	Eurofins Suite B6 (filtered metals)	Total Recoverable Hydrocarbons	Moisture Set	Eurofins Suite B15	Phenols (Speciated)	Metals M8	Chlorinated Hydrocarbons	Sulphate (as SO4)	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Formaldehyde (free)	Formaldehyde	Conductivity/ (1:5 aqueous extract at 25°C as rec.)	Chloride	Asbestos Absence /Presence	Asbestos - AS4964		
Melbourne Laboratory - NATA Site # 1254						X		X					X	X			X					X	X					
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				X	X	X	X
Brisbane Laboratory - NATA Site # 20794																												
Perth Laboratory - NATA Site # 23736																												
Mayfield Laboratory - NATA Site # 25079																												
External Laboratory																												
43	BH03-2.0	Aug 16, 2021		Soil	S21-Au35694															X								
44	BH03-4.0	Aug 16, 2021		Soil	S21-Au35695															X								
45	BH03-5.0	Aug 16, 2021		Soil	S21-Au35696															X								
46	BH03-6.0	Aug 16, 2021		Soil	S21-Au35697															X								
47	BH03-7.0	Aug 16, 2021		Soil	S21-Au35698															X								
48	BH03-9.0	Aug 16, 2021		Soil	S21-Au35699															X								
49	BH04-0.35	Aug 16, 2021		Soil	S21-Au35700															X								
50	BH04-1.0	Aug 16, 2021		Soil	S21-Au35701															X								
51	BH05-1.0	Aug 16, 2021		Soil	S21-Au35702															X								
52	BH05-2.0	Aug 16, 2021		Soil	S21-Au35703															X								
53	BH05-4.0	Aug 16, 2021		Soil	S21-Au35704															X								

Company Name: WSP Australia P/L NSW
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Sample Detail						Exchangeable Sodium Percentage (ESP)	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/MOC	BTEXN and Volatile TRH	Eurofins Suite B7A	Eurofins Suite B6 (filtered metals)	Total Recoverable Hydrocarbons	Moisture Set	Eurofins Suite B15	Phenols (Speciated)	Metals M8	Chlorinated Hydrocarbons	Sulphate (as SO4)	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Formaldehyde (free)	Formaldehyde	Conductivity (1:5 aqueous extract at 25°C as rec.)	Chloride	Asbestos Absence /Presence	Asbestos - AS4964		
Melbourne Laboratory - NATA Site # 1254						X		X					X	X	X		X					X	X					
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X		X	X	X				X	X	X	X
Brisbane Laboratory - NATA Site # 20794																												
Perth Laboratory - NATA Site # 23736																												
Mayfield Laboratory - NATA Site # 25079																												
External Laboratory																												
54	BH05-6.0	Aug 16, 2021		Soil	S21-Au35705															X								
55	BH05-7.0	Aug 16, 2021		Soil	S21-Au35706															X								
56	BH05-8.0	Aug 16, 2021		Soil	S21-Au35707															X								
57	BH05-9.0	Aug 16, 2021		Soil	S21-Au35708															X								
58	BH06-0.5	Aug 16, 2021		Soil	S21-Au35709															X								
59	BH06-1.0	Aug 16, 2021		Soil	S21-Au35710															X								
60	BH06-2.0	Aug 16, 2021		Soil	S21-Au35711															X								
61	BH07-1.0	Aug 16, 2021		Soil	S21-Au35712															X								
62	BH07-2.0	Aug 16, 2021		Soil	S21-Au35713															X								
63	BH07-4.0	Aug 16, 2021		Soil	S21-Au35714															X								
64	BH8-1.0	Aug 16, 2021		Soil	S21-Au35715															X								

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Received: Aug 19, 2021 12:28 PM
Due: Sep 1, 2021
Priority: 1 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Exchangeable Sodium Percentage (ESP)	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/MOC	BTEXN and Volatile TRH	Eurofins Suite B7A	Eurofins Suite B6 (filtered metals)	Eurofins Suite B6	Total Recoverable Hydrocarbons	Moisture Set	Eurofins Suite B15	Phenols (Speciated)	Metals M8	Chlorinated Hydrocarbons	Sulphate (as SO4)	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Formaldehyde (free)	Formaldehyde	Conductivity (1:5 aqueous extract at 25°C as rec.)	Chloride	Asbestos Absence /Presence	Asbestos - AS4964
Melbourne Laboratory - NATA Site # 1254						X		X						X				X					X				
Sydney Laboratory - NATA Site # 18217						X		X		X	X		X	X	X		X		X	X	X				X	X	
Brisbane Laboratory - NATA Site # 20794																											
Perth Laboratory - NATA Site # 23736																											
Mayfield Laboratory - NATA Site # 25079																											
External Laboratory																											
65	BH9-0.5	Aug 16, 2021		Soil	S21-Au35716																X						
66	BH9-2.0	Aug 16, 2021		Soil	S21-Au35717																X						
67	BH9-3.0	Aug 16, 2021		Soil	S21-Au35718																X						
68	BH9-4.0	Aug 16, 2021		Soil	S21-Au35719																X						
69	BH9-5.0	Aug 16, 2021		Soil	S21-Au35720																X						
70	BH9-6.0	Aug 16, 2021		Soil	S21-Au35721																X						
71	BH9-7.0	Aug 16, 2021		Soil	S21-Au35722																X						
72	BH9-8.0	Aug 16, 2021		Soil	S21-Au35723																X						
73	BH9-9.0	Aug 16, 2021		Soil	S21-Au35724																X						
74	BH9-10.0	Aug 16, 2021		Soil	S21-Au35725																X						
75	BH10-0.5	Aug 16, 2021		Soil	S21-Au35726																X						

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

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Melbourne Laboratory - NATA Site # 1254						X		X						X	X			X					X	X				
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X
Brisbane Laboratory - NATA Site # 20794																												
Perth Laboratory - NATA Site # 23736																												
Mayfield Laboratory - NATA Site # 25079																												
External Laboratory																												
76	BH10-1.0	Aug 16, 2021		Soil	S21-Au35727																X							
77	BH10-2.0	Aug 16, 2021		Soil	S21-Au35728																X							
78	BH11-0.5	Aug 16, 2021		Soil	S21-Au35729																X							
79	BH11-1.0	Aug 16, 2021		Soil	S21-Au35730																X							
80	BH11-2.0	Aug 16, 2021		Soil	S21-Au35731																X							
81	BH12-0.5	Aug 16, 2021		Soil	S21-Au35732																X							
82	BH12-1.0	Aug 16, 2021		Soil	S21-Au35733																X							
83	BH13-3.0	Aug 16, 2021		Soil	S21-Au35734																X							
84	BH13-5.0	Aug 16, 2021		Soil	S21-Au35735																X							
85	BH13-6.0	Aug 16, 2021		Soil	S21-Au35736																X							
86	BH13-8.0	Aug 16, 2021		Soil	S21-Au35737																X							

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Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
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NSW 2001

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Sample Detail						Asbestos - AS4964	Asbestos Absence / Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO ₄)	Chlorinated Hydrocarbons	Metals M8	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Total Recoverable Hydrocarbons	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X			X	X						X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																											
Perth Laboratory - NATA Site # 23736																											
Mayfield Laboratory - NATA Site # 25079																											
External Laboratory																											
87	BH13-9.0	Aug 16, 2021		Soil	S21-Au35738							X															
88	BH13-10.0	Aug 16, 2021		Soil	S21-Au35739							X															
89	QA01	Aug 16, 2021		Soil	S21-Au35740							X															
90	QA02	Aug 16, 2021		Soil	S21-Au35741					X						X				X					X		
91	QA03	Aug 16, 2021		Soil	S21-Au35742							X															
92	QA04	Aug 16, 2021		Soil	S21-Au35743							X															
93	TRIP SPIKE	Aug 16, 2021		Soil	S21-Au35744																					X	
94	TRIP BLANK	Aug 16, 2021		Soil	S21-Au35746																			X			
95	RB01	Aug 16, 2021		Water	S21-Au35747		X			X							X	X				X			X		
Test Counts						21	1	5	12	1	23	56	12	6	3	1	8	22	35	1	9	1	12	1	11	1	5

WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: Imogen Powell

Report 818308-S-V3
Project name CHARTER HALL GLENDENNING DRILLING WORKS
Project ID PS125811
Received Date Aug 19, 2021

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	58	-	-	94
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	107	-	-	-
p-Terphenyl-d14 (surr.)	1	%	90	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
α-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
β-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
δ-HCH	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchloroendate (surr.)	1	%	127	-	-	135
Tetrachloro-m-xylene (surr.)	1	%	99	-	-	105
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Coumaphos	2	mg/kg	< 2	-	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	-	< 0.2

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Disulfoton	0.2	mg/kg	< 0.2	-	-	< 0.2
EPN	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Monocrotophos	2	mg/kg	< 2	-	-	< 2
Naled	0.2	mg/kg	< 0.2	-	-	< 0.2
Omethoate	2	mg/kg	< 2	-	-	< 2
Phorate	0.2	mg/kg	< 0.2	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	119	-	-	141
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	127	-	-	135
Tetrachloro-m-xylene (surr.)	1	%	99	-	-	105
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	< 1

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Nitrophenol	1	mg/kg	< 1	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Nitrophenol	5	mg/kg	< 5	-	-	< 5
Dinoseb	20	mg/kg	< 20	-	-	< 20
Phenol	0.5	mg/kg	< 0.5	-	-	< 0.5
Phenol-d6 (surr.)	1	%	145	-	-	127
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	< 20
Formaldehyde (free)	10	mg/kg	< 10	-	-	< 10
% Moisture	1	%	15	11	17	19
Chloride	10	mg/kg	-	740	30	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	460	100	-
Sulphate (as SO4)	10	mg/kg	-	100	32	-
Exchangeable Sodium Percentage (ESP)	0.1	%	-	24	16	-
Heavy Metals						
Arsenic	2	mg/kg	12	-	-	3.0
Cadmium	0.4	mg/kg	< 0.4	-	-	< 0.4
Chromium	5	mg/kg	39	-	-	28
Copper	5	mg/kg	27	-	-	43
Lead	5	mg/kg	16	-	-	< 5
Mercury	0.1	mg/kg	< 0.1	-	-	< 0.1
Nickel	5	mg/kg	31	-	-	66
Zinc	5	mg/kg	32	-	-	44
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH01-0.2 Soil S21-Au35652 Aug 16, 2021	BH01-2.0 Soil S21-Au35653 Aug 16, 2021	BH01-5.0 Soil S21-Au35654 Aug 16, 2021	BH02-0.15 Soil S21-Au35655 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 0.5
Allyl chloride	0.5	mg/kg	-	-	-	< 0.5
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.5	mg/kg	-	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromoform	0.5	mg/kg	-	-	-	< 0.5
Bromomethane	0.5	mg/kg	-	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Chloroethane	0.5	mg/kg	-	-	-	< 0.5
Chloroform	0.5	mg/kg	-	-	-	< 0.5
Chloromethane	0.5	mg/kg	-	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Dibromomethane	0.5	mg/kg	-	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.5	mg/kg	-	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	-	< 0.5
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.5	mg/kg	-	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	-	< 0.5
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Trichloroethene	0.5	mg/kg	-	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
Total MAH*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	-	-	94
Toluene-d8 (surr.)	1	%	-	-	-	96
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
1-Chloronaphthalene	0.5	mg/kg	-	-	-	< 0.5
1-Naphthylamine	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Chloronaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	107
2-Methylnaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
2-Naphthylamine	0.5	mg/kg	-	-	-	< 0.5
2-Nitroaniline	1	mg/kg	-	-	-	< 1
2-Nitrophenol	1	mg/kg	-	-	-	< 1
2-Picoline	0.5	mg/kg	-	-	-	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
2.4-Dinitrotoluene	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Tribromophenol (surr.)	1	%	-	-	-	121
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.6-Dinitrotoluene	1	mg/kg	-	-	-	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
3-Methylcholanthrene	0.5	mg/kg	-	-	-	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	-	-	-	< 0.5
4-Aminobiphenyl	0.5	mg/kg	-	-	-	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Nitrophenol	5	mg/kg	-	-	-	< 5
4.4'-DDD	0.5	mg/kg	-	-	-	< 0.5
4.4'-DDE	0.5	mg/kg	-	-	-	< 0.5
4.4'-DDT	1	mg/kg	-	-	-	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
a-HCH	0.5	mg/kg	-	-	-	< 0.5
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Acetophenone	0.5	mg/kg	-	-	-	< 0.5
Aldrin	0.5	mg/kg	-	-	-	< 0.5
Aniline	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
b-HCH	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH01-0.2	BH01-2.0	BH01-5.0	BH02-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35652	S21-Au35653	S21-Au35654	S21-Au35655
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Benzyl chloride	0.5	mg/kg	-	-	-	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	-	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	-	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	-	< 5
Butyl benzyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
d-HCH	0.5	mg/kg	-	-	-	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,j)acridine	0.5	mg/kg	-	-	-	< 0.5
Dibenzofuran	0.5	mg/kg	-	-	-	< 0.5
Dieldrin	0.5	mg/kg	-	-	-	< 0.5
Diethyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dimethyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	-	-	-	< 0.5
Diphenylamine	0.5	mg/kg	-	-	-	< 0.5
Endosulfan I	0.5	mg/kg	-	-	-	< 0.5
Endosulfan II	0.5	mg/kg	-	-	-	< 0.5
Endosulfan sulphate	0.5	mg/kg	-	-	-	< 0.5
Endrin	0.5	mg/kg	-	-	-	< 0.5
Endrin aldehyde	0.5	mg/kg	-	-	-	< 0.5
Endrin ketone	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
g-HCH (Lindane)	0.5	mg/kg	-	-	-	< 0.5
Heptachlor	0.5	mg/kg	-	-	-	< 0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	-	-	-	< 1
Hexachloroethane	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Methoxychlor	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Nitrobenzene	0.5	mg/kg	-	-	-	< 0.5
Nitrobenzene-d5 (surr.)	1	%	-	-	-	136
Pentachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	127
Pronamide	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Trifluralin	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH02-0.3 Soil S21-Au35656 Aug 16, 2021	BH02-0.5 Soil S21-Au35657 Aug 16, 2021	BH03-0.3 Soil S21-Au35658 Aug 16, 2021	BH03-0.5 Soil S21-Au35659 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	-	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50	76
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50	76
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	59	-	82	87
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	114	-	-	110
p-Terphenyl-d14 (surr.)	1	%	98	-	-	90
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	146	-	128	115
Tetrachloro-m-xylene (surr.)	1	%	108	-	108	104
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	-	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	-	< 2	< 2
Naled	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Omethoate	2	mg/kg	< 2	-	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	133	-	142	120
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	146	-	128	115
Tetrachloro-m-xylene (surr.)	1	%	108	-	108	104
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	-	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	0.6
2,4-Dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	-	< 5	< 5
Dinoseb	20	mg/kg	< 20	-	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	INT	-	112	127
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	< 20

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Formaldehyde (free)	10	mg/kg	< 10	-	< 10	< 10
% Moisture	1	%	19	21	19	17
Chloride	10	mg/kg	-	53	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	190	-	-
Sulphate (as SO ₄)	10	mg/kg	-	36	-	-
Exchangeable Sodium Percentage (ESP)	0.1	%	-	23	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.9	-	8.6	10
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	34	-	23	30
Copper	5	mg/kg	42	-	28	24
Lead	5	mg/kg	< 5	-	14	15
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	68	-	24	24
Zinc	5	mg/kg	51	-	64	43
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
Total MAH*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	-	-	82	-
Toluene-d8 (surr.)	1	%	-	-	100	-
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
1-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
1-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	108	-
2-Methylnaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
2-Nitroaniline	1	mg/kg	-	-	< 1	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Picoline	0.5	mg/kg	-	-	< 0.5	-
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dinitrophenol	5	mg/kg	-	-	< 5	-
2,4-Dinitrotoluene	0.5	mg/kg	-	-	< 0.5	-
2,4,5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,4,6-Tribromophenol (surr.)	1	%	-	-	68	-
2,4,6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,6-Dinitrotoluene	1	mg/kg	-	-	< 1	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
3-Methylcholanthrene	0.5	mg/kg	-	-	< 0.5	-
3,3'-Dichlorobenzidine	0.5	mg/kg	-	-	< 0.5	-
4-Aminobiphenyl	0.5	mg/kg	-	-	< 0.5	-
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
4,4'-DDD	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDE	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDT	1	mg/kg	-	-	< 1	-
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
a-HCH	0.5	mg/kg	-	-	< 0.5	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Acetophenone	0.5	mg/kg	-	-	< 0.5	-
Aldrin	0.5	mg/kg	-	-	< 0.5	-
Aniline	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
b-HCH	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Benzyl chloride	0.5	mg/kg	-	-	< 0.5	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	< 0.5	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	< 0.5	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	< 5	-
Butyl benzyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
d-HCH	0.5	mg/kg	-	-	< 0.5	-
Di-n-butyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Di-n-octyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,j)acridine	0.5	mg/kg	-	-	< 0.5	-
Dibenzofuran	0.5	mg/kg	-	-	< 0.5	-
Dieldrin	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH02-0.3	BH02-0.5	BH03-0.3	BH03-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35656	S21-Au35657	S21-Au35658	S21-Au35659
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatiles Organics						
Diethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethylaminoazobenzene	0.5	mg/kg	-	-	< 0.5	-
Diphenylamine	0.5	mg/kg	-	-	< 0.5	-
Endosulfan I	0.5	mg/kg	-	-	< 0.5	-
Endosulfan II	0.5	mg/kg	-	-	< 0.5	-
Endosulfan sulphate	0.5	mg/kg	-	-	< 0.5	-
Endrin	0.5	mg/kg	-	-	< 0.5	-
Endrin aldehyde	0.5	mg/kg	-	-	< 0.5	-
Endrin ketone	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
g-HCH (Lindane)	0.5	mg/kg	-	-	< 0.5	-
Heptachlor	0.5	mg/kg	-	-	< 0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorocyclopentadiene	1	mg/kg	-	-	< 1	-
Hexachloroethane	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Methoxychlor	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodibutylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodipropylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosopiperidine	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene-d5 (surr.)	1	%	-	-	121	-
Pentachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachloronitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	112	-
Pronamide	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Trifluralin	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	35	< 20
TRH C15-C28	50	mg/kg	-	-	95	< 50
TRH C29-C36	50	mg/kg	-	-	130	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	260	< 50

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	180	< 100
TRH >C34-C40	100	mg/kg	-	-	120	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	300	< 100
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	64	61
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	105
p-Terphenyl-d14 (surr.)	1	%	-	-	-	93
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	87	134
Tetrachloro-m-xylene (surr.)	1	%	-	-	108	99
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	130	123
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	87	134
Tetrachloro-m-xylene (surr.)	1	%	-	-	108	99
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2,4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	11	< 0.4
Total cresols*	0.5	mg/kg	-	-	11	< 0.5
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	6.4	< 0.5
Phenol-d6 (surr.)	1	%	-	-	120	INT
Total Non-Halogenated Phenol*	20	mg/kg	-	-	28.4	< 20
Formaldehyde (free)	10	mg/kg	-	-	< 10	< 10
% Moisture	1	%	12	10	18	20
Chloride	10	mg/kg	910	790	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	360	230	-	-
Sulphate (as SO4)	10	mg/kg	190	190	-	-
Exchangeable Sodium Percentage (ESP)	0.1	%	19	36	-	-

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	< 2	9.6
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	9.0	21
Copper	5	mg/kg	-	-	6.1	16
Lead	5	mg/kg	-	-	< 5	9.8
Mercury	0.1	mg/kg	-	-	< 0.1	< 0.1
Nickel	5	mg/kg	-	-	5.9	< 5
Zinc	5	mg/kg	-	-	26	21
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
Total MAH*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	-	-	64	-
Toluene-d8 (surr.)	1	%	-	-	64	-
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
1-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
1-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	110	-
2-Methylnaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
2-Nitroaniline	1	mg/kg	-	-	< 1	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-
2-Picoline	0.5	mg/kg	-	-	< 0.5	-
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
2.4-Dinitrotoluene	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	-

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatiles Organics						
2,4,6-Tribromophenol (surr.)	1	%	-	-	67	-
2,4,6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,6-Dinitrotoluene	1	mg/kg	-	-	< 1	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	11	-
3-Methylcholanthrene	0.5	mg/kg	-	-	< 0.5	-
3,3'-Dichlorobenzidine	0.5	mg/kg	-	-	< 0.5	-
4-Aminobiphenyl	0.5	mg/kg	-	-	< 0.5	-
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
4,4'-DDD	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDE	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDT	1	mg/kg	-	-	< 1	-
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
a-HCH	0.5	mg/kg	-	-	< 0.5	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Acetophenone	0.5	mg/kg	-	-	< 0.5	-
Aldrin	0.5	mg/kg	-	-	< 0.5	-
Aniline	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
b-HCH	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Benzyl chloride	0.5	mg/kg	-	-	< 0.5	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	< 0.5	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	< 0.5	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	< 5	-
Butyl benzyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
d-HCH	0.5	mg/kg	-	-	< 0.5	-
Di-n-butyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Di-n-octyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,j)acridine	0.5	mg/kg	-	-	< 0.5	-
Dibenzofuran	0.5	mg/kg	-	-	< 0.5	-
Dieldrin	0.5	mg/kg	-	-	< 0.5	-
Diethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethylaminoazobenzene	0.5	mg/kg	-	-	< 0.5	-
Diphenylamine	0.5	mg/kg	-	-	< 0.5	-
Endosulfan I	0.5	mg/kg	-	-	< 0.5	-
Endosulfan II	0.5	mg/kg	-	-	< 0.5	-
Endosulfan sulphate	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH03-3.0	BH03-8.0	BH04-0.5	BH04-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35660	S21-Au35661	S21-Au35662	S21-Au35663
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Endrin	0.5	mg/kg	-	-	< 0.5	-
Endrin aldehyde	0.5	mg/kg	-	-	< 0.5	-
Endrin ketone	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
g-HCH (Lindane)	0.5	mg/kg	-	-	< 0.5	-
Heptachlor	0.5	mg/kg	-	-	< 0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorocyclopentadiene	1	mg/kg	-	-	< 1	-
Hexachloroethane	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Methoxychlor	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodibutylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodipropylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosopiperidine	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene-d5 (surr.)	1	%	-	-	117	-
Pentachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachloronitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Phenol	0.5	mg/kg	-	-	6.4	-
Phenol-d6 (surr.)	1	%	-	-	120	-
Pronamide	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Trifluralin	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH05-0.2	BH05-0.5	BH05-3.0	BH05-5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35664	S21-Au35665	S21-Au35666	S21-Au35667
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	180	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	180	-	-	-
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	190	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	190	-	-	-

Client Sample ID			BH05-0.2	BH05-0.5	BH05-3.0	BH05-5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35664	S21-Au35665	S21-Au35666	S21-Au35667
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	62	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	101	-	-	-
p-Terphenyl-d14 (surr.)	1	%	98	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
α-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
β-HCH	0.05	mg/kg	< 0.05	-	-	-
δ-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			BH05-0.2	BH05-0.5	BH05-3.0	BH05-5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35664	S21-Au35665	S21-Au35666	S21-Au35667
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorodate (surr.)	1	%	144	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	132	-	-	-

Client Sample ID			BH05-0.2	BH05-0.5	BH05-3.0	BH05-5.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35664	S21-Au35665	S21-Au35666	S21-Au35667
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloredate (surr.)	1	%	144	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	105	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	144	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Formaldehyde (free)	10	mg/kg	< 10	-	-	-
% Moisture	1	%	16	19	22	12
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	200	200	420	730
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.2	7.8	5.6	6.6
Heavy Metals						
Arsenic	2	mg/kg	3.1	-	-	-
Cadmium	0.4	mg/kg	< 0.4	-	-	-
Chromium	5	mg/kg	13	-	-	-
Copper	5	mg/kg	< 5	-	-	-
Lead	5	mg/kg	11	-	-	-
Mercury	0.1	mg/kg	< 0.1	-	-	-
Nickel	5	mg/kg	< 5	-	-	-
Zinc	5	mg/kg	24	-	-	-

Client Sample ID			BH06-0.2	BH07-0.1	BH07-0.5	BH07-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35668	S21-Au35669	S21-Au35670	S21-Au35671
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	61	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	61	-	-
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	67	71	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	98	105	-	-
p-Terphenyl-d14 (surr.)	1	%	91	89	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			BH06-0.2	BH07-0.1	BH07-0.5	BH07-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35668	S21-Au35669	S21-Au35670	S21-Au35671
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchloroendate (surr.)	1	%	150	120	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	102	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-

Client Sample ID			BH06-0.2	BH07-0.1	BH07-0.5	BH07-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35668	S21-Au35669	S21-Au35670	S21-Au35671
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Omethoate	2	mg/kg	< 2	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	133	114	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchloroendate (surr.)	1	%	150	120	-	-
Tetrachloro-m-xylene (surr.)	1	%	100	102	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol-d6 (surr.)	1	%	136	109	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Formaldehyde (free)	10	mg/kg	< 10	< 10	-	-
% Moisture	1	%	13	8.6	8.9	12
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	52	150	920
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	8.1	6.3	5.3

Client Sample ID			BH06-0.2	BH07-0.1	BH07-0.5	BH07-3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35668	S21-Au35669	S21-Au35670	S21-Au35671
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	13	6.2	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-
Chromium	5	mg/kg	23	39	-	-
Copper	5	mg/kg	48	29	-	-
Lead	5	mg/kg	23	30	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-
Nickel	5	mg/kg	21	14	-	-
Zinc	5	mg/kg	78	110	-	-

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	-	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	60	69	93
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(b,j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Chrysene	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	102	-	85
p-Terphenyl-d14 (surr.)	1	%	-	97	-	61
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	-	INT	108	INT
Tetrachloro-m-xylene (surr.)	1	%	-	105	80	75
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	135	125	INT
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	-	INT	108	INT
Tetrachloro-m-xylene (surr.)	1	%	-	105	80	75
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2,4,6-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	-	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	< 1	< 1	< 1

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	-	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	-	< 5	< 5	< 5
Dinoseb	20	mg/kg	-	< 20	< 20	< 20
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	147	118	89
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	< 20	< 20
Formaldehyde (free)	10	mg/kg	-	< 10	< 10	< 10
% Moisture	1	%	12	9.2	12	14
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	1000	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.5	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	-	2.3	< 2	3.4
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	13	29	18
Copper	5	mg/kg	-	6.8	66	20
Lead	5	mg/kg	-	7.1	< 5	6.9
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	< 5	64	7.6
Zinc	5	mg/kg	-	19	85	16
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	-	-	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	-	-	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	-	-	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	-	-	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	< 0.5	-
Allyl chloride	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH07-5.0 Soil S21-Au35672 Aug 16, 2021	BH8-0.2 Soil S21-Au35673 Aug 16, 2021	BH9-0.1 Soil S21-Au35674 Aug 16, 2021	BH9-0.3 Soil S21-Au35675 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Bromobenzene	0.5	mg/kg	-	-	< 0.5	-
Bromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromodichloromethane	0.5	mg/kg	-	-	< 0.5	-
Bromoform	0.5	mg/kg	-	-	< 0.5	-
Bromomethane	0.5	mg/kg	-	-	< 0.5	-
Carbon disulfide	0.5	mg/kg	-	-	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	-	-	< 0.5	-
Chlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Chloroethane	0.5	mg/kg	-	-	< 0.5	-
Chloroform	0.5	mg/kg	-	-	< 0.5	-
Chloromethane	0.5	mg/kg	-	-	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Dibromochloromethane	0.5	mg/kg	-	-	< 0.5	-
Dibromomethane	0.5	mg/kg	-	-	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	-	-	< 0.5	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
Iodomethane	0.5	mg/kg	-	-	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	< 0.5	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
Methylene Chloride	0.5	mg/kg	-	-	< 0.5	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Styrene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloroethene	0.5	mg/kg	-	-	< 0.5	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	< 0.5	-
Trichloroethene	0.5	mg/kg	-	-	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	-	-	< 0.5	-
Vinyl chloride	0.5	mg/kg	-	-	< 0.5	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
Total MAH*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	-	-	69	-
Toluene-d8 (surr.)	1	%	-	-	69	-
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
1-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
1-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatiles Organics						
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,3,5-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
2-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	95	-
2-Methylnaphthalene	0.5	mg/kg	-	-	< 0.5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Naphthylamine	0.5	mg/kg	-	-	< 0.5	-
2-Nitroaniline	1	mg/kg	-	-	< 1	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-
2-Picoline	0.5	mg/kg	-	-	< 0.5	-
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dinitrophenol	5	mg/kg	-	-	< 5	-
2,4-Dinitrotoluene	0.5	mg/kg	-	-	< 0.5	-
2,4,5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,4,6-Tribromophenol (surr.)	1	%	-	-	64	-
2,4,6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,6-Dinitrotoluene	1	mg/kg	-	-	< 1	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
3-Methylcholanthrene	0.5	mg/kg	-	-	< 0.5	-
3,3'-Dichlorobenzidine	0.5	mg/kg	-	-	< 0.5	-
4-Aminobiphenyl	0.5	mg/kg	-	-	< 0.5	-
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	< 0.5	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
4,4'-DDD	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDE	0.5	mg/kg	-	-	< 0.5	-
4,4'-DDT	1	mg/kg	-	-	< 1	-
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
a-HCH	0.5	mg/kg	-	-	< 0.5	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Acetophenone	0.5	mg/kg	-	-	< 0.5	-
Aldrin	0.5	mg/kg	-	-	< 0.5	-
Aniline	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
b-HCH	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Benzyl chloride	0.5	mg/kg	-	-	< 0.05	-

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatiles Organics						
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	< 0.5	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	< 0.5	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	< 5	-
Butyl benzyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
d-HCH	0.5	mg/kg	-	-	< 0.5	-
Di-n-butyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Di-n-octyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a,j)acridine	0.5	mg/kg	-	-	< 0.5	-
Dibenzofuran	0.5	mg/kg	-	-	< 0.5	-
Dieldrin	0.5	mg/kg	-	-	< 0.5	-
Diethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethyl phthalate	0.5	mg/kg	-	-	< 0.5	-
Dimethylaminoazobenzene	0.5	mg/kg	-	-	< 0.5	-
Diphenylamine	0.5	mg/kg	-	-	< 0.5	-
Endosulfan I	0.5	mg/kg	-	-	< 0.5	-
Endosulfan II	0.5	mg/kg	-	-	< 0.5	-
Endosulfan sulphate	0.5	mg/kg	-	-	< 0.5	-
Endrin	0.5	mg/kg	-	-	< 0.5	-
Endrin aldehyde	0.5	mg/kg	-	-	< 0.5	-
Endrin ketone	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
g-HCH (Lindane)	0.5	mg/kg	-	-	< 0.5	-
Heptachlor	0.5	mg/kg	-	-	< 0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorocyclopentadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachloroethane	0.5	mg/kg	-	-	< 0.5	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Methoxychlor	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodibutylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosodipropylamine	0.5	mg/kg	-	-	< 0.5	-
N-Nitrosopiperidine	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Nitrobenzene-d5 (surr.)	1	%	-	-	122	-
Pentachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachloronitrobenzene	0.5	mg/kg	-	-	< 0.5	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	118	-
Pronamide	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Trifluralin	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			BH07-5.0	BH8-0.2	BH9-0.1	BH9-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35672	S21-Au35673	S21-Au35674	S21-Au35675
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Chlorinated Hydrocarbons						
1,2-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,2,3-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,2,4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,3-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,3,5-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
1,4-Dichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Benzal chloride	0.05	mg/kg	-	-	< 0.05	-
Benzotrifluoride	0.05	mg/kg	-	-	< 0.05	-
Benzyl chloride	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachlorocyclopentadiene	0.5	mg/kg	-	-	< 0.5	-
Hexachloroethane	0.5	mg/kg	-	-	< 0.5	-
Pentachlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	80	-

Client Sample ID			BH9-1.0	BH10-0.3	BH11-0.2	BH12-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35676	S21-Au35677	S21-Au35678	S21-Au35679
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	72	92	65	76

Client Sample ID			BH9-1.0 Soil S21-Au35676 Aug 16, 2021	BH10-0.3 Soil S21-Au35677 Aug 16, 2021	BH11-0.2 Soil S21-Au35678 Aug 16, 2021	BH12-0.3 Soil S21-Au35679 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	79	-	-	-
p-Terphenyl-d14 (surr.)	1	%	67	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
α-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
β-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
δ-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	74	104	104	132
Tetrachloro-m-xylene (surr.)	1	%	86	121	101	101

Client Sample ID			BH9-1.0	BH10-0.3	BH11-0.2	BH12-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35676	S21-Au35677	S21-Au35678	S21-Au35679
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	60	123	127	149
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	74	104	104	132
Tetrachloro-m-xylene (surr.)	1	%	86	121	101	101

Client Sample ID			BH9-1.0	BH10-0.3	BH11-0.2	BH12-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35676	S21-Au35677	S21-Au35678	S21-Au35679
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	< 20	-	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	-	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	< 20	-	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenol-d6 (surr.)	1	%	67	106	-	120
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	< 20
Formaldehyde (free)	10	mg/kg	< 10	-	< 10	< 10
% Moisture	1	%	10	9.3	9.9	22
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	5.7	43	14
Copper	5	mg/kg	9.4	11	65	9.3
Lead	5	mg/kg	6.2	< 5	< 5	5.4
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	120	8.9
Zinc	5	mg/kg	9.0	16	70	13
Volatile Organics						
1,1-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2-Dibromoethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,3-Trichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			BH9-1.0	BH10-0.3	BH11-0.2	BH12-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35676	S21-Au35677	S21-Au35678	S21-Au35679
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1,3-Dichloropropane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,3,5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	92	65	76
Toluene-d8 (surr.)	1	%	-	92	71	76

Client Sample ID			BH9-1.0 Soil S21-Au35676 Aug 16, 2021	BH10-0.3 Soil S21-Au35677 Aug 16, 2021	BH11-0.2 Soil S21-Au35678 Aug 16, 2021	BH12-0.3 Soil S21-Au35679 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	95	90	105
2-Methylnaphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	-	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	-	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4-Dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2,4-Dinitrotoluene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2,4,6-Tribromophenol (surr.)	1	%	-	INT	58	112
2,4,6-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2,6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	1	mg/kg	-	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	-	< 5	< 5	< 5
4,4'-DDD	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4,4'-DDE	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4,4'-DDT	1	mg/kg	-	< 1	< 1	< 1
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
a-HCH	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			BH9-1.0 Soil S21-Au35676 Aug 16, 2021	BH10-0.3 Soil S21-Au35677 Aug 16, 2021	BH11-0.2 Soil S21-Au35678 Aug 16, 2021	BH12-0.3 Soil S21-Au35679 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatile Organics						
Acetophenone	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
b-HCH	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzyl chloride	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
d-HCH	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a,j)acridine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
g-HCH (Lindane)	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	-	< 0.5	< 1	< 0.5
Hexachloroethane	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Methoxychlor	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5

Client Sample ID			BH9-1.0	BH10-0.3	BH11-0.2	BH12-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35676	S21-Au35677	S21-Au35678	S21-Au35679
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	-	120	116	60
Pentachlorobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	-	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	106	105	120
Pronamide	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chlorinated Hydrocarbons						
1,2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Benzal chloride	0.05	mg/kg	-	< 0.05	-	< 0.05
Benzotrifluoride	0.05	mg/kg	-	< 0.05	-	< 0.05
Benzyl chloride	0.5	mg/kg	-	< 0.5	-	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	-	< 0.5	-	< 0.5
Hexachloroethane	0.5	mg/kg	-	< 0.5	-	< 0.5
Pentachlorobenzene	0.5	mg/kg	-	< 0.5	-	< 0.5
Tetrachloro-m-xylene (surr.)	1	%	-	121	-	101

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	70	97	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	73	-	-	-
p-Terphenyl-d14 (surr.)	1	%	86	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
α-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
β-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
δ-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorodate (surr.)	1	%	88	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	93	81	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	0.4	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	0.4	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-
Omethoate	2	mg/kg	< 2	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	84	70	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchloredate (surr.)	1	%	88	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	93	81	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	100	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Formaldehyde (free)	10	mg/kg	< 10	< 10	-	-
% Moisture	1	%	14	19	16	14
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	130	120
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	8.3	6.1
Heavy Metals						
Arsenic	2	mg/kg	4.5	4.4	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-
Chromium	5	mg/kg	17	32	-	-
Copper	5	mg/kg	13	23	-	-
Lead	5	mg/kg	11	9.1	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-
Nickel	5	mg/kg	< 5	27	-	-
Zinc	5	mg/kg	16	26	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	-	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	-	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	-	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	-	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	< 0.5	-	-
Allyl chloride	0.5	mg/kg	-	< 0.5	-	-
Benzene	0.1	mg/kg	-	< 0.1	-	-
Bromobenzene	0.5	mg/kg	-	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	-	< 0.5	-	-
Bromoform	0.5	mg/kg	-	< 0.5	-	-
Bromomethane	0.5	mg/kg	-	< 0.5	-	-
Carbon disulfide	0.5	mg/kg	-	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Chloroethane	0.5	mg/kg	-	< 0.5	-	-
Chloroform	0.5	mg/kg	-	< 0.5	-	-
Chloromethane	0.5	mg/kg	-	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	-	< 0.5	-	-
Dibromomethane	0.5	mg/kg	-	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	-	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
Iodomethane	0.5	mg/kg	-	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	-	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	-	< 0.5	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Styrene	0.5	mg/kg	-	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	-	< 0.5	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
Trichloroethene	0.5	mg/kg	-	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	-	< 0.5	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
Total MAH*	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	-	97	-	-
Toluene-d8 (surr.)	1	%	-	96	-	-
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	< 5	-	-
1-Chloronaphthalene	0.5	mg/kg	-	< 0.5	-	-
1-Naphthylamine	0.5	mg/kg	-	< 0.5	-	-
1,2-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,2,3-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,2,4-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,3-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,3,5-Trichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
1,4-Dichlorobenzene	0.5	mg/kg	-	< 0.5	-	-
2-Chloronaphthalene	0.5	mg/kg	-	< 0.5	-	-
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	53	-	-
2-Methylnaphthalene	0.5	mg/kg	-	< 0.5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Naphthylamine	0.5	mg/kg	-	< 0.5	-	-
2-Nitroaniline	1	mg/kg	-	< 1	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2-Picoline	0.5	mg/kg	-	< 0.5	-	-
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2,4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2,4-Dinitrotoluene	0.5	mg/kg	-	< 0.5	-	-
2,4,5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2,4,6-Tribromophenol (surr.)	1	%	-	71	-	-
2,4,6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2,6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2,6-Dinitrotoluene	1	mg/kg	-	< 1	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
3-Methylcholanthrene	0.5	mg/kg	-	< 0.5	-	-
3,3'-Dichlorobenzidine	0.5	mg/kg	-	< 0.5	-	-
4-Aminobiphenyl	0.5	mg/kg	-	< 0.5	-	-
4-Bromophenyl phenyl ether	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatiles Organics						
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
4,4'-DDD	0.5	mg/kg	-	< 0.5	-	-
4,4'-DDE	0.5	mg/kg	-	< 0.5	-	-
4,4'-DDT	1	mg/kg	-	< 1	-	-
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
a-HCH	0.5	mg/kg	-	< 0.5	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Acetophenone	0.5	mg/kg	-	< 0.5	-	-
Aldrin	0.5	mg/kg	-	< 0.5	-	-
Aniline	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
b-HCH	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	< 0.5	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Benzyl chloride	0.5	mg/kg	-	< 0.5	-	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	< 0.5	-	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	< 0.5	-	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	< 5	-	-
Butyl benzyl phthalate	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
d-HCH	0.5	mg/kg	-	< 0.5	-	-
Di-n-butyl phthalate	0.5	mg/kg	-	< 0.5	-	-
Di-n-octyl phthalate	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a,j)acridine	0.5	mg/kg	-	< 0.5	-	-
Dibenzofuran	0.5	mg/kg	-	< 0.5	-	-
Dieldrin	0.5	mg/kg	-	< 0.5	-	-
Diethyl phthalate	0.5	mg/kg	-	< 0.5	-	-
Dimethyl phthalate	0.5	mg/kg	-	< 0.5	-	-
Dimethylaminoazobenzene	0.5	mg/kg	-	< 0.5	-	-
Diphenylamine	0.5	mg/kg	-	< 0.5	-	-
Endosulfan I	0.5	mg/kg	-	< 0.5	-	-
Endosulfan II	0.5	mg/kg	-	< 0.5	-	-
Endosulfan sulphate	0.5	mg/kg	-	< 0.5	-	-
Endrin	0.5	mg/kg	-	< 0.5	-	-
Endrin aldehyde	0.5	mg/kg	-	< 0.5	-	-
Endrin ketone	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
g-HCH (Lindane)	0.5	mg/kg	-	< 0.5	-	-
Heptachlor	0.5	mg/kg	-	< 0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	< 0.5	-	-
Hexachlorobenzene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH12-2.0	BH13-0.3	BH13-0.5	BH13-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35680	S21-Au35681	S21-Au35682	S21-Au35683
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobutadiene	0.5	mg/kg	-	< 0.5	-	-
Hexachlorocyclopentadiene	1	mg/kg	-	< 1	-	-
Hexachloroethane	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Methoxychlor	0.5	mg/kg	-	< 0.5	-	-
N-Nitrosodibutylamine	0.5	mg/kg	-	< 0.5	-	-
N-Nitrosodipropylamine	0.5	mg/kg	-	< 0.5	-	-
N-Nitrosopiperidine	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Nitrobenzene	0.5	mg/kg	-	< 0.5	-	-
Nitrobenzene-d5 (surr.)	1	%	-	INT	-	-
Pentachlorobenzene	0.5	mg/kg	-	< 0.5	-	-
Pentachloronitrobenzene	0.5	mg/kg	-	< 0.5	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	68	-	-
Pronamide	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Trifluralin	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH13-2.0	BH13-4.0	BH13-7.0	QA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35684	S21-Au35685	S21-Au35686	S21-Au35741
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	59	-	-	-

Client Sample ID			BH13-2.0	BH13-4.0	BH13-7.0	QA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35684	S21-Au35685	S21-Au35686	S21-Au35741
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	75	-	-	-
p-Terphenyl-d14 (surr.)	1	%	87	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
α-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
β-HCH	0.05	mg/kg	< 0.05	-	-	-
δ-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloroendate (surr.)	1	%	85	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	97	-	-	-

Client Sample ID			BH13-2.0	BH13-4.0	BH13-7.0	QA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35684	S21-Au35685	S21-Au35686	S21-Au35741
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	82	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	85	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	97	-	-	-

Client Sample ID			BH13-2.0 Soil S21-Au35684 Aug 16, 2021	BH13-4.0 Soil S21-Au35685 Aug 16, 2021	BH13-7.0 Soil S21-Au35686 Aug 16, 2021	QA02 Soil S21-Au35741 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2,4,5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,4,6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2,4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2,4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	99	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Formaldehyde (free)	10	mg/kg	< 10	-	-	< 10
% Moisture	1	%	14	11	10	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	390	710	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.7	6.6	-
Heavy Metals						
Arsenic	2	mg/kg	6.2	-	-	< 2
Cadmium	0.4	mg/kg	< 0.4	-	-	< 0.4
Chromium	5	mg/kg	21	-	-	7.0
Copper	5	mg/kg	18	-	-	7.2
Lead	5	mg/kg	15	-	-	< 5
Mercury	0.1	mg/kg	< 0.1	-	-	< 0.1
Nickel	5	mg/kg	< 5	-	-	< 5
Zinc	5	mg/kg	11	-	-	7.1
Volatile Organics						
1,1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1,1-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
1,1,1-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1,1,1,2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1,1,2-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1,1,2,2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1,2-Dibromoethane	0.5	mg/kg	-	-	-	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1,2-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1,2,3-Trichloropropane	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH13-2.0 Soil S21-Au35684 Aug 16, 2021	BH13-4.0 Soil S21-Au35685 Aug 16, 2021	BH13-7.0 Soil S21-Au35686 Aug 16, 2021	QA02 Soil S21-Au35741 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
1,2,4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,3-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1,3,5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 0.5
Allyl chloride	0.5	mg/kg	-	-	-	< 0.5
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.5	mg/kg	-	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromoform	0.5	mg/kg	-	-	-	< 0.5
Bromomethane	0.5	mg/kg	-	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Chloroethane	0.5	mg/kg	-	-	-	< 0.5
Chloroform	0.5	mg/kg	-	-	-	< 0.5
Chloromethane	0.5	mg/kg	-	-	-	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Dibromomethane	0.5	mg/kg	-	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.5	mg/kg	-	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	-	< 0.5
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.5	mg/kg	-	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	-	< 0.5
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Trichloroethene	0.5	mg/kg	-	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
Total MAH*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	-	-	102
Toluene-d8 (surr.)	1	%	-	-	-	125

Client Sample ID			BH13-2.0	BH13-4.0	BH13-7.0	QA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35684	S21-Au35685	S21-Au35686	S21-Au35741
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	-	-	< 5
1-Chloronaphthalene	0.5	mg/kg	-	-	-	< 0.5
1-Naphthylamine	0.5	mg/kg	-	-	-	< 0.5
1,2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2,3-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2,3,4-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2,3,5-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2,4-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,2,4,5-Tetrachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,3,5-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Chloronaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	111
2-Methylnaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
2-Naphthylamine	0.5	mg/kg	-	-	-	< 0.5
2-Nitroaniline	1	mg/kg	-	-	-	< 1
2-Nitrophenol	1	mg/kg	-	-	-	< 1
2-Picoline	0.5	mg/kg	-	-	-	< 0.5
2,3,4,6-Tetrachlorophenol	0.5	mg/kg	-	-	-	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2,4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2,4-Dinitrophenol	5	mg/kg	-	-	-	< 5
2,4-Dinitrotoluene	0.5	mg/kg	-	-	-	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2,4,6-Tribromophenol (surr.)	1	%	-	-	-	64
2,4,6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2,6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2,6-Dinitrotoluene	1	mg/kg	-	-	-	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
3-Methylcholanthrene	0.5	mg/kg	-	-	-	< 0.5
3,3'-Dichlorobenzidine	0.5	mg/kg	-	-	-	< 0.5
4-Aminobiphenyl	0.5	mg/kg	-	-	-	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Nitrophenol	5	mg/kg	-	-	-	< 5
4,4'-DDD	0.5	mg/kg	-	-	-	< 0.5
4,4'-DDE	0.5	mg/kg	-	-	-	< 0.5
4,4'-DDT	1	mg/kg	-	-	-	< 1
7,12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
a-HCH	0.5	mg/kg	-	-	-	< 0.5
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH13-2.0 Soil S21-Au35684 Aug 16, 2021	BH13-4.0 Soil S21-Au35685 Aug 16, 2021	BH13-7.0 Soil S21-Au35686 Aug 16, 2021	QA02 Soil S21-Au35741 Aug 16, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatiles Organics						
Acetophenone	0.5	mg/kg	-	-	-	< 0.5
Aldrin	0.5	mg/kg	-	-	-	< 0.5
Aniline	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
b-HCH	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Benzyl chloride	0.5	mg/kg	-	-	-	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	-	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	-	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	-	< 5
Butyl benzyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
d-HCH	0.5	mg/kg	-	-	-	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,j)acridine	0.5	mg/kg	-	-	-	< 0.5
Dibenzofuran	0.5	mg/kg	-	-	-	< 0.5
Dieldrin	0.5	mg/kg	-	-	-	< 0.5
Diethyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dimethyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	-	-	-	< 0.5
Diphenylamine	0.5	mg/kg	-	-	-	< 0.5
Endosulfan I	0.5	mg/kg	-	-	-	< 0.5
Endosulfan II	0.5	mg/kg	-	-	-	< 0.5
Endosulfan sulphate	0.5	mg/kg	-	-	-	< 0.5
Endrin	0.5	mg/kg	-	-	-	< 0.5
Endrin aldehyde	0.5	mg/kg	-	-	-	< 1
Endrin ketone	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
g-HCH (Lindane)	0.5	mg/kg	-	-	-	< 0.5
Heptachlor	0.5	mg/kg	-	-	-	< 0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	-	-	-	< 1
Hexachloroethane	0.5	mg/kg	-	-	-	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Methoxychlor	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Nitrobenzene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH13-2.0	BH13-4.0	BH13-7.0	QA02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Au35684	S21-Au35685	S21-Au35686	S21-Au35741
Date Sampled			Aug 16, 2021	Aug 16, 2021	Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	-	-	-	137
Pentachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	123
Pronamide	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Trifluralin	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			TRIP SPIKE	TRIP BLANK
Sample Matrix			Soil	Soil
Eurofins Sample No.			S21-Au35744	S21-Au35746
Date Sampled			Aug 16, 2021	Aug 16, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	-	< 20
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	103
TRH C6-C10	1	%	80	-
Total Recoverable Hydrocarbons				
Naphthalene	1	%	74	-
TRH C6-C9	1	%	82	-
BTEX				
Benzene	1	%	83	-
Ethylbenzene	1	%	77	-
m&p-Xylenes	1	%	77	-
o-Xylene	1	%	78	-
Toluene	1	%	80	-
Xylenes - Total	1	%	78	-
4-Bromofluorobenzene (surr.)	1	%	88	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Aug 31, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 31, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 31, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Aug 31, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Aug 23, 2021	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Aug 23, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Formaldehyde (free)	Melbourne	Sep 01, 2021	14 Days
- Method: Melbourne Water HMSO(HCHO free)			
Chloride	Sydney	Aug 23, 2021	28 Days
- Method: In-house method LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO ₄)	Sydney	Aug 23, 2021	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Aug 23, 2021	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Chlorinated Hydrocarbons	Melbourne	Aug 24, 2021	14 Days
- Method: USEPA 8121 Chlorinated Hydrocarbons			
% Moisture	Sydney	Aug 19, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Aug 24, 2021	7 Days
- Method: LTM-INO-4030 Conductivity			
Exchangeable Sodium Percentage (ESP)	Melbourne	Aug 24, 2021	28 Days
- Method: LTM-MET-3060 - Cation Exchange Capacity (CEC) & Exchangeable Sodium Percentage (ESP)			
Volatile Organics	Sydney	Aug 31, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Aug 31, 2021	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
- Method: USEPA SW 846 8270			

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Company Name: WSP Australia P/L NSW
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Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	BH01-0.2	Aug 16, 2021		Soil	S21-Au35652	X					X						X	X			X				
2	BH01-2.0	Aug 16, 2021		Soil	S21-Au35653			X						X				X						X	
3	BH01-5.0	Aug 16, 2021		Soil	S21-Au35654			X						X				X						X	
4	BH02-0.15	Aug 16, 2021		Soil	S21-Au35655	X					X					X	X	X	X				X		
5	BH02-0.3	Aug 16, 2021		Soil	S21-Au35656	X					X						X	X			X				
6	BH02-0.5	Aug 16, 2021		Soil	S21-Au35657			X						X				X						X	
7	BH03-0.3	Aug 16, 2021		Soil	S21-Au35658	X					X					X	X	X	X				X		
8	BH03-0.5	Aug 16, 2021		Soil	S21-Au35659	X					X						X	X			X				
9	BH03-3.0	Aug 16, 2021		Soil	S21-Au35660			X						X				X							

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Received: Aug 19, 2021 12:28 PM
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Priority: 5 Day
Contact Name: Imogen Powell

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Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/NOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
10	BH03-8.0	Aug 16, 2021		Soil	S21-Au35661			X						X				X							X
11	BH04-0.5	Aug 16, 2021		Soil	S21-Au35662	X					X					X	X	X	X				X		
12	BH04-2.0	Aug 16, 2021		Soil	S21-Au35663	X					X						X	X			X				
13	BH05-0.2	Aug 16, 2021		Soil	S21-Au35664	X			X		X		X				X	X			X				
14	BH05-0.5	Aug 16, 2021		Soil	S21-Au35665				X				X					X							
15	BH05-3.0	Aug 16, 2021		Soil	S21-Au35666				X				X					X							
16	BH05-5.0	Aug 16, 2021		Soil	S21-Au35667				X				X					X							
17	BH06-0.2	Aug 16, 2021		Soil	S21-Au35668	X					X						X	X				X			
18	BH07-0.1	Aug 16, 2021		Soil	S21-Au35669	X			X		X		X				X	X			X				
19	BH07-0.5	Aug 16, 2021		Soil	S21-Au35670				X				X					X							
20	BH07-3.0	Aug 16, 2021		Soil	S21-Au35671				X				X					X							

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Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOCNOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
21	BH07-5.0	Aug 16, 2021		Soil	S21-Au35672				X				X					X							
22	BH8-0.2	Aug 16, 2021		Soil	S21-Au35673	X					X						X	X			X				
23	BH9-0.1	Aug 16, 2021		Soil	S21-Au35674	X					X				X	X	X	X	X				X		
24	BH9-0.3	Aug 16, 2021		Soil	S21-Au35675	X					X						X	X			X				
25	BH9-1.0	Aug 16, 2021		Soil	S21-Au35676	X					X						X	X			X				
26	BH10-0.3	Aug 16, 2021		Soil	S21-Au35677	X									X	X	X	X	X				X		
27	BH11-0.2	Aug 16, 2021		Soil	S21-Au35678	X					X						X	X	X				X		
28	BH12-0.3	Aug 16, 2021		Soil	S21-Au35679	X					X				X	X	X	X	X				X		
29	BH12-2.0	Aug 16, 2021		Soil	S21-Au35680	X					X						X	X			X				
30	BH13-0.3	Aug 16, 2021		Soil	S21-Au35681	X					X						X	X	X				X		
31	BH13-0.5	Aug 16, 2021		Soil	S21-Au35682				X				X					X							

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Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/MOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
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External Laboratory																									
32	BH13-1.0	Aug 16, 2021		Soil	S21-Au35683				X				X					X							
33	BH13-2.0	Aug 16, 2021		Soil	S21-Au35684	X					X						X	X			X				
34	BH13-4.0	Aug 16, 2021		Soil	S21-Au35685				X				X					X							
35	BH13-7.0	Aug 16, 2021		Soil	S21-Au35686				X				X					X							
36	BH01-5.0	Aug 16, 2021		Soil	S21-Au35687							X													
37	BH01-1.0	Aug 16, 2021		Soil	S21-Au35688							X													
38	BH01-3.0	Aug 16, 2021		Soil	S21-Au35689							X													
39	BH01-4.0	Aug 16, 2021		Soil	S21-Au35690							X													
40	BH02-1.0	Aug 16, 2021		Soil	S21-Au35691							X													
41	BH02-2.0	Aug 16, 2021		Soil	S21-Au35692							X													
42	BH03-1.0	Aug 16, 2021		Soil	S21-Au35693							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
43	BH03-2.0	Aug 16, 2021		Soil	S21-Au35694							X													
44	BH03-4.0	Aug 16, 2021		Soil	S21-Au35695							X													
45	BH03-5.0	Aug 16, 2021		Soil	S21-Au35696							X													
46	BH03-6.0	Aug 16, 2021		Soil	S21-Au35697							X													
47	BH03-7.0	Aug 16, 2021		Soil	S21-Au35698							X													
48	BH03-9.0	Aug 16, 2021		Soil	S21-Au35699							X													
49	BH04-0.35	Aug 16, 2021		Soil	S21-Au35700							X													
50	BH04-1.0	Aug 16, 2021		Soil	S21-Au35701							X													
51	BH05-1.0	Aug 16, 2021		Soil	S21-Au35702							X													
52	BH05-2.0	Aug 16, 2021		Soil	S21-Au35703							X													
53	BH05-4.0	Aug 16, 2021		Soil	S21-Au35704							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
54	BH05-6.0	Aug 16, 2021		Soil	S21-Au35705							X													
55	BH05-7.0	Aug 16, 2021		Soil	S21-Au35706							X													
56	BH05-8.0	Aug 16, 2021		Soil	S21-Au35707							X													
57	BH05-9.0	Aug 16, 2021		Soil	S21-Au35708							X													
58	BH06-0.5	Aug 16, 2021		Soil	S21-Au35709							X													
59	BH06-1.0	Aug 16, 2021		Soil	S21-Au35710							X													
60	BH06-2.0	Aug 16, 2021		Soil	S21-Au35711							X													
61	BH07-1.0	Aug 16, 2021		Soil	S21-Au35712							X													
62	BH07-2.0	Aug 16, 2021		Soil	S21-Au35713							X													
63	BH07-4.0	Aug 16, 2021		Soil	S21-Au35714							X													
64	BH8-1.0	Aug 16, 2021		Soil	S21-Au35715							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
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External Laboratory																									
65	BH9-0.5	Aug 16, 2021		Soil	S21-Au35716							X													
66	BH9-2.0	Aug 16, 2021		Soil	S21-Au35717							X													
67	BH9-3.0	Aug 16, 2021		Soil	S21-Au35718							X													
68	BH9-4.0	Aug 16, 2021		Soil	S21-Au35719							X													
69	BH9-5.0	Aug 16, 2021		Soil	S21-Au35720							X													
70	BH9-6.0	Aug 16, 2021		Soil	S21-Au35721							X													
71	BH9-7.0	Aug 16, 2021		Soil	S21-Au35722							X													
72	BH9-8.0	Aug 16, 2021		Soil	S21-Au35723							X													
73	BH9-9.0	Aug 16, 2021		Soil	S21-Au35724							X													
74	BH9-10.0	Aug 16, 2021		Soil	S21-Au35725							X													
75	BH10-0.5	Aug 16, 2021		Soil	S21-Au35726							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
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External Laboratory																									
76	BH10-1.0	Aug 16, 2021		Soil	S21-Au35727							X													
77	BH10-2.0	Aug 16, 2021		Soil	S21-Au35728							X													
78	BH11-0.5	Aug 16, 2021		Soil	S21-Au35729							X													
79	BH11-1.0	Aug 16, 2021		Soil	S21-Au35730							X													
80	BH11-2.0	Aug 16, 2021		Soil	S21-Au35731							X													
81	BH12-0.5	Aug 16, 2021		Soil	S21-Au35732							X													
82	BH12-1.0	Aug 16, 2021		Soil	S21-Au35733							X													
83	BH13-3.0	Aug 16, 2021		Soil	S21-Au35734							X													
84	BH13-5.0	Aug 16, 2021		Soil	S21-Au35735							X													
85	BH13-6.0	Aug 16, 2021		Soil	S21-Au35736							X													
86	BH13-8.0	Aug 16, 2021		Soil	S21-Au35737							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
87	BH13-9.0	Aug 16, 2021		Soil	S21-Au35738							X													
88	BH13-10.0	Aug 16, 2021		Soil	S21-Au35739							X													
89	QA01	Aug 16, 2021		Soil	S21-Au35740							X													
90	QA02	Aug 16, 2021		Soil	S21-Au35741							X													
91	QA03	Aug 16, 2021		Soil	S21-Au35742							X													
92	QA04	Aug 16, 2021		Soil	S21-Au35743							X													
93	TRIP SPIKE	Aug 16, 2021		Soil	S21-Au35744																			X	
94	TRIP BLANK	Aug 16, 2021		Soil	S21-Au35746																	X			
95	RB01	Aug 16, 2021		Water	S21-Au35747		X			X						X	X			X			X		
Test Counts						21	1	5	12	1	22	57	12	6	3	8	22	35	9	1	12	1	10	1	5

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 0			20	Pass	
Method Blank							
Chloride	mg/kg	< 10			10	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Sulphate (as SO4)	mg/kg	< 10			10	Pass	
Exchangeable Sodium Percentage (ESP)	%	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Volatile Organics							
1,1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1,1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1,1,1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1,1,1,2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1,1,2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1,1,2,2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1,2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1,2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1,2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1,2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1,2,3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1,2,4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1,4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 1			1	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2,3,4,6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2,4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,6-Dinitrotoluene	mg/kg	< 1			1	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3,3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4,4'-DDD	mg/kg	< 0.5			0.5	Pass	
4,4'-DDE	mg/kg	< 0.5			0.5	Pass	
4,4'-DDT	mg/kg	< 1			1	Pass	
7,12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-HCH	mg/kg	< 0.5			0.5	Pass	
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
b-HCH	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
d-HCH	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,j)acridine	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
g-HCH (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			0.5	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chlorinated Hydrocarbons							
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Benzal chloride	mg/kg	< 0.05			0.05	Pass	
Benzotrichloride	mg/kg	< 0.05			0.05	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			1	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	101			70-130	Pass	
Naphthalene	%	86			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	101			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	84			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes - Total*	%	93			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	104			70-130	Pass	
Anthracene	%	79			70-130	Pass	
Benz(a)anthracene	%	125			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	
Benzo(b&j)fluoranthene	%	107			70-130	Pass	
Benzo(g,h,i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	108			70-130	Pass	
Chrysene	%	122			70-130	Pass	
Dibenz(a,h)anthracene	%	106			70-130	Pass	
Fluoranthene	%	87			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	107			70-130	Pass	
Naphthalene	%	107			70-130	Pass	
Phenanthrene	%	94			70-130	Pass	
Pyrene	%	84			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	70			70-130	Pass	
4,4'-DDD	%	90			70-130	Pass	
4,4'-DDE	%	78			70-130	Pass	
4,4'-DDT	%	98			70-130	Pass	
a-HCH	%	82			70-130	Pass	
Aldrin	%	100			70-130	Pass	
b-HCH	%	75			70-130	Pass	
d-HCH	%	78			70-130	Pass	
Dieldrin	%	101			70-130	Pass	
Endosulfan I	%	91			70-130	Pass	
Endosulfan II	%	80			70-130	Pass	
Endosulfan sulphate	%	71			70-130	Pass	
Endrin	%	97			70-130	Pass	
Endrin aldehyde	%	72			70-130	Pass	
Endrin ketone	%	86			70-130	Pass	
g-HCH (Lindane)	%	73			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	%	83			70-130	Pass	
Heptachlor epoxide	%	107			70-130	Pass	
Hexachlorobenzene	%	95			70-130	Pass	
Methoxychlor	%	77			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	106			70-130	Pass	
Dimethoate	%	108			70-130	Pass	
Ethion	%	124			70-130	Pass	
Fenitrothion	%	123			70-130	Pass	
Methyl parathion	%	119			70-130	Pass	
Mevinphos	%	130			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	80			70-130	Pass	
Aroclor-1260	%	111			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	113			30-130	Pass	
2,4-Dichlorophenol	%	108			30-130	Pass	
2,4,5-Trichlorophenol	%	108			30-130	Pass	
2,4,6-Trichlorophenol	%	91			30-130	Pass	
2,6-Dichlorophenol	%	101			30-130	Pass	
4-Chloro-3-methylphenol	%	101			30-130	Pass	
Pentachlorophenol	%	91			30-130	Pass	
Tetrachlorophenols - Total	%	86			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	%	119			30-130	Pass	
2-Methyl-4,6-dinitrophenol	%	89			30-130	Pass	
2-Nitrophenol	%	126			30-130	Pass	
2,4-Dimethylphenol	%	125			30-130	Pass	
2,4-Dinitrophenol	%	127			30-130	Pass	
2-Methylphenol (o-Cresol)	%	101			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	103			30-130	Pass	
4-Nitrophenol	%	126			30-130	Pass	
Dinoseb	%	107			30-130	Pass	
Phenol	%	95			30-130	Pass	
LCS - % Recovery							
Chloride	%	103			70-130	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	104			70-130	Pass	
Sulphate (as SO ₄)	%	103			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	112			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	113			80-120	Pass	
Copper	%	112			80-120	Pass	
Lead	%	107			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	113			80-120	Pass	
Zinc	%	108			80-120	Pass	
LCS - % Recovery							
Volatile Organics							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1-Dichloroethene	%	95			70-130	Pass	
1.1.1-Trichloroethane	%	94			70-130	Pass	
1.2-Dichlorobenzene	%	109			70-130	Pass	
1.2-Dichloroethane	%	89			70-130	Pass	
Benzene	%	98			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	106			70-130	Pass	
o-Xylene	%	105			70-130	Pass	
Toluene	%	100			70-130	Pass	
Trichloroethene	%	101			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	74			70-130	Pass	
1.4-Dichlorobenzene	%	81			70-130	Pass	
2-Chlorophenol	%	86			30-130	Pass	
2-Methylphenol (o-Cresol)	%	102			30-130	Pass	
2.4-Dichlorophenol	%	117			30-130	Pass	
2.4-Dimethylphenol	%	111			30-130	Pass	
2.4-Dinitrophenol	%	107			30-130	Pass	
2.4-Dinitrotoluene	%	114			70-130	Pass	
2.4.5-Trichlorophenol	%	110			30-130	Pass	
2.4.6-Trichlorophenol	%	122			30-130	Pass	
2.6-Dichlorophenol	%	120			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	110			30-130	Pass	
4-Chloro-3-methylphenol	%	85			30-130	Pass	
4-Nitrophenol	%	113			30-130	Pass	
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	108			70-130	Pass	
Anthracene	%	96			70-130	Pass	
Benz(a)anthracene	%	107			70-130	Pass	
Benzo(a)pyrene	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	%	104			70-130	Pass	
Benzo(g,h,i)perylene	%	105			70-130	Pass	
Benzo(k)fluoranthene	%	106			70-130	Pass	
Chrysene	%	105			70-130	Pass	
Dibenz(a,h)anthracene	%	104			70-130	Pass	
Fluoranthene	%	100			70-130	Pass	
Fluorene	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	104			70-130	Pass	
N-Nitrosodipropylamine	%	99			70-130	Pass	
Naphthalene	%	99			70-130	Pass	
Pentachlorophenol	%	100			30-130	Pass	
Phenanthrene	%	98			70-130	Pass	
Phenol	%	87			30-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Chlorinated Hydrocarbons							
1.2.4-Trichlorobenzene	%	91			70-130	Pass	
1.4-Dichlorobenzene	%	86			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	S21-Au38649	NCP	%	90		70-130	Pass	
Naphthalene	S21-Au38649	NCP	%	80		70-130	Pass	
TRH C6-C10	S21-Au38649	NCP	%	88		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S21-Au38649	NCP	%	97		70-130	Pass	
Toluene	S21-Au38649	NCP	%	93		70-130	Pass	
Ethylbenzene	S21-Au38649	NCP	%	91		70-130	Pass	
m&p-Xylenes	S21-Au38649	NCP	%	93		70-130	Pass	
o-Xylene	S21-Au38649	NCP	%	99		70-130	Pass	
Xylenes - Total*	S21-Au38649	NCP	%	95		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Benzo(g,h,i)perylene	S21-Au36364	NCP	%	94		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Aldrin	S21-Au36364	NCP	%	99		70-130	Pass	
Spike - % Recovery								
Organophosphorus Pesticides				Result 1				
Dimethoate	S21-Au36364	NCP	%	96		70-130	Pass	
Ethion	S21-Au36364	NCP	%	116		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
4-Chloro-3-methylphenol	S21-Au36364	NCP	%	114		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Methylphenol (o-Cresol)	S21-Au36364	NCP	%	98		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Au36364	NCP	%	107		30-130	Pass	
4-Nitrophenol	S21-Au50061	NCP	%	127		30-130	Pass	
Phenol	S21-Au36364	NCP	%	103		30-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	S21-Au35126	NCP	%	108		75-125	Pass	
Cadmium	S21-Au35126	NCP	%	90		75-125	Pass	
Chromium	S21-Au35126	NCP	%	99		75-125	Pass	
Copper	S21-Au35126	NCP	%	107		75-125	Pass	
Lead	S21-Au35126	NCP	%	117		75-125	Pass	
Mercury	S21-Au35126	NCP	%	93		75-125	Pass	
Nickel	S21-Au35126	NCP	%	94		75-125	Pass	
Zinc	S21-Au33663	NCP	%	111		75-125	Pass	
Spike - % Recovery								
				Result 1				
Chloride	S21-Au36225	NCP	%	97		70-130	Pass	
Sulphate (as SO4)	S21-Au36225	NCP	%	98		70-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2,4-Dimethylphenol	W21-Au32082	NCP	%	115		30-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	S21-Au35664	CP	%	100		70-130	Pass	
Acenaphthylene	S21-Au35664	CP	%	110		70-130	Pass	
Anthracene	S21-Au35664	CP	%	84		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benz(a)anthracene	S21-Au35664	CP	%	130			70-130	Pass	
Benzo(a)pyrene	S21-Au35664	CP	%	118			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Au35664	CP	%	123			70-130	Pass	
Benzo(k)fluoranthene	S21-Au35664	CP	%	101			70-130	Pass	
Chrysene	S21-Au35664	CP	%	127			70-130	Pass	
Dibenz(a,h)anthracene	S21-Au35664	CP	%	116			70-130	Pass	
Fluoranthene	S21-Au35664	CP	%	95			70-130	Pass	
Fluorene	S21-Au35664	CP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Au35664	CP	%	114			70-130	Pass	
Naphthalene	S21-Au35664	CP	%	111			70-130	Pass	
Phenanthrene	S21-Au35664	CP	%	73			70-130	Pass	
Pyrene	S21-Au35664	CP	%	92			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-Au35664	CP	%	79			70-130	Pass	
4.4'-DDD	S21-Au35664	CP	%	97			70-130	Pass	
4.4'-DDE	S21-Au35664	CP	%	84			70-130	Pass	
4.4'-DDT	S21-Au35664	CP	%	93			70-130	Pass	
a-HCH	S21-Au35664	CP	%	87			70-130	Pass	
b-HCH	S21-Au35664	CP	%	79			70-130	Pass	
d-HCH	S21-Au35664	CP	%	80			70-130	Pass	
Dieldrin	S21-Au35664	CP	%	71			70-130	Pass	
Endosulfan I	S21-Au35664	CP	%	102			70-130	Pass	
Endosulfan II	S21-Au35664	CP	%	84			70-130	Pass	
Endosulfan sulphate	S21-Au35664	CP	%	73			70-130	Pass	
Endrin	S21-Au35664	CP	%	102			70-130	Pass	
Endrin ketone	S21-Au35664	CP	%	91			70-130	Pass	
g-HCH (Lindane)	S21-Au35664	CP	%	76			70-130	Pass	
Heptachlor	S21-Au35664	CP	%	89			70-130	Pass	
Heptachlor epoxide	S21-Au35664	CP	%	80			70-130	Pass	
Hexachlorobenzene	S21-Au35664	CP	%	75			70-130	Pass	
Methoxychlor	S21-Au35664	CP	%	74			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S21-Au35664	CP	%	104			70-130	Pass	
Fenitrothion	S21-Au35664	CP	%	130			70-130	Pass	
Mevinphos	S21-Au35664	CP	%	130			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-Au35664	CP	%	86			70-130	Pass	
Aroclor-1260	S21-Au35664	CP	%	124			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S21-Au35664	CP	%	116			30-130	Pass	
2.4-Dichlorophenol	S21-Au35664	CP	%	117			30-130	Pass	
2.4.5-Trichlorophenol	S21-Au35664	CP	%	117			30-130	Pass	
2.4.6-Trichlorophenol	S21-Au35664	CP	%	100			30-130	Pass	
2.6-Dichlorophenol	S21-Au35664	CP	%	105			30-130	Pass	
Pentachlorophenol	S21-Au35664	CP	%	108			30-130	Pass	
Tetrachlorophenols - Total	S21-Au35664	CP	%	103			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S21-Au35664	CP	%	88			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S21-Au35664	CP	%	89			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	S21-Au35664	CP	%	122			30-130	Pass	
2,4-Dinitrophenol	S21-Au35664	CP	%	79			70-130	Pass	
Dinoseb	S21-Au35664	CP	%	101			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Au35674	CP	%	90			70-130	Pass	
TRH >C10-C16	S21-Au35674	CP	%	88			70-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
Hexachlorobenzene	M21-Au28166	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Endrin aldehyde	S21-Au40504	NCP	%	82			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Au41896	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Au41896	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Au41896	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Au41896	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Au41896	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Au41896	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Au41896	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Au41896	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Au41896	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S21-Au36225	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Sulphate (as SO4)	S21-Au36225	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Formaldehyde (free)	S21-Au35655	CP	mg/kg	< 10	< 10	<1	30%	Pass	
% Moisture	S21-Au35655	CP	%	19	20	9.0	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
2-Propanone (Acetone)	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromobenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,2-Dichloroethene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1,3-Dichloropropene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,2-Dichloroethene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S21-Au37815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Semivolatile Organics				Result 1	Result 2	RPD		
1-Chloronaphthalene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1-Naphthylamine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Chloronaphthalene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Methylnaphthalene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Naphthylamine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Nitroaniline	S21-Au47131	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2-Picoline	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,3,4,6-Tetrachlorophenol	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,6-Dinitrotoluene	S21-Au47131	NCP	mg/kg	< 1	< 1	<1	30%	Pass
3-Methylcholanthrene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
3,3'-Dichlorobenzidine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Aminobiphenyl	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Bromophenyl phenyl ether	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorophenyl phenyl ether	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4,4'-DDD	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4,4'-DDE	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4,4'-DDT	S21-Au47131	NCP	mg/kg	< 1	< 1	<1	30%	Pass
7,12-Dimethylbenz(a)anthracene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
a-HCH	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acetophenone	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aldrin	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Aniline	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Semivolatile Organics				Result 1	Result 2	RPD		
b-HCH	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bis(2-chloroethoxy)methane	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bis(2-chloroisopropyl)ether	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bis(2-ethylhexyl)phthalate	S21-Au47131	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Butyl benzyl phthalate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
d-HCH	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Di-n-butyl phthalate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Di-n-octyl phthalate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,j)acridine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenzofuran	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dieldrin	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Diethyl phthalate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dimethyl phthalate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dimethylaminoazobenzene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Diphenylamine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endosulfan I	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endosulfan II	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endosulfan sulphate	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endrin	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endrin aldehyde	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Endrin ketone	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
g-HCH (Lindane)	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Heptachlor	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Heptachlor epoxide	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methoxychlor	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
N-Nitrosodibutylamine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
N-Nitrosodipropylamine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
N-Nitrosopiperidine	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Nitrobenzene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pentachloronitrobenzene	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pronamide	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trifluralin	S21-Au47131	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Exchangeable Sodium Percentage (ESP)	S21-Au35657	CP	%	23	22	4.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S21-Au35665	CP	%	19	22	15	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Conductivity (1:5 aqueous extract at 25°C as rec.)	S21-Au35670	CP	uS/cm	150	160	5.7	30%	Pass
pH (1:5 Aqueous extract at 25°C as rec.)	S21-Au35670	CP	pH Units	6.3	6.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	S21-Au35673	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S21-Au35673	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S21-Au35673	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	S21-Au35673	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S21-Au35673	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S21-Au35673	CP	mg/kg	< 100	< 100	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S21-Au35673	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	S21-Au35673	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Ethion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	S21-Au35673	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	S21-Au35673	CP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	S21-Au35673	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	S21-Au35673	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	S21-Au35673	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	S21-Au35673	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	S21-Au35673	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	S21-Au35673	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	S21-Au35673	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	S21-Au35673	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	S21-Au35673	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	S21-Au35673	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	S21-Au35673	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	S21-Au35673	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	S21-Au35673	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	S21-Au35673	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	S21-Au35673	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S21-Au35674	CP	mg/kg	< 2	< 2	<1	30%	Pass
Cadmium	S21-Au35674	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S21-Au35674	CP	mg/kg	29	30	2.0	30%	Pass
Copper	S21-Au35674	CP	mg/kg	66	71	7.0	30%	Pass
Lead	S21-Au35674	CP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	S21-Au35674	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S21-Au35674	CP	mg/kg	64	62	2.0	30%	Pass
Zinc	S21-Au35674	CP	mg/kg	85	93	9.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S21-Au35675	CP	%	14	14	4.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	S21-Au35677	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S21-Au35677	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S21-Au35677	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	S21-Au35677	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S21-Au35677	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S21-Au35677	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
Pentachlorophenol	S21-Au35677	CP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Semivolatile Organics				Result 1	Result 2	RPD		
1,2-Dichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3-Trichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3,4-Tetrachlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,3,5-Tetrachlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4-Trichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,2,4,5-Tetrachlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3-Dichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,3,5-Trichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1,4-Dichlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzyl chloride	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Hexachlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Hexachlorobutadiene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Hexachlorocyclopentadiene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Hexachloroethane	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pentachlorobenzene	M21-Au44485	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Chlorinated Hydrocarbons				Result 1	Result 2	RPD		
Benzal chloride	M21-Au47723	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Benzotrichloride	M21-Au47723	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S21-Au35685	CP	%	11	13	20	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Conductivity (1:5 aqueous extract at 25°C as rec.)	S21-Au35686	CP	uS/cm	710	690	1.9	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C6-C9	S21-Au35741	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C10-C14	S21-Au35741	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	S21-Au35741	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	S21-Au35741	CP	mg/kg	< 50	< 50	<1	30%	Pass
Naphthalene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S21-Au35741	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S21-Au35741	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S21-Au35741	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S21-Au35741	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S21-Au35741	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S21-Au35741	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S21-Au35741	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S21-Au35741	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	S21-Au35741	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total*	S21-Au35741	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromobenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Dibromomethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.2-Dichloroethene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S21-Au35741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments

This report was revised V3 to include analysis for sample QA02 (Au35741) as per COC.

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

John Nguyen	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
John Nguyen	Senior Analyst-Metal (NSW)
Joseph Edouard	Senior Analyst-Organic (VIC)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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NSW 2001



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: Imogen Powell
Report 818308-AID
Project Name CHARTER HALL GLENDENNING DRILLING WORKS
Project ID PS125811
Received Date Aug 19, 2021
Date Reported Aug 31, 2021

Methodology:

Asbestos Fibre
 Identification

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

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

Unknown Mineral
 Fibres

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

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

Subsampling Soil
 Samples

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

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

Bonded asbestos-
 containing material
 (ACM)

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

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

Limit of Reporting

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

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

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

Project Name CHARTER HALL GLENDENNING DRILLING WORKS
Project ID PS125811
Date Sampled Aug 16, 2021
Report 818308-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH01-0.2	21-Au35652	Aug 16, 2021	Approximate Sample 81g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH02-0.15	21-Au35655	Aug 16, 2021	Approximate Sample 80g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH02-0.3	21-Au35656	Aug 16, 2021	Approximate Sample 91g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH03-0.3	21-Au35658	Aug 16, 2021	Approximate Sample 82g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH03-0.5	21-Au35659	Aug 16, 2021	Approximate Sample 82g Sample consisted of: Brown fine-grained clayey soil, glass and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH04-0.5	21-Au35662	Aug 16, 2021	Approximate Sample 167g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH04-2.0	21-Au35663	Aug 16, 2021	Approximate Sample 181g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH05-0.2	21-Au35664	Aug 16, 2021	Approximate Sample 53g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH06-0.2	21-Au35668	Aug 16, 2021	Approximate Sample 72g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07-0.1	21-Au35669	Aug 16, 2021	Approximate Sample 64g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH8-0.2	21-Au35673	Aug 16, 2021	Approximate Sample 98g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH9-0.1	21-Au35674	Aug 16, 2021	Approximate Sample 78g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH9-0.3	21-Au35675	Aug 16, 2021	Approximate Sample 99g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH9-1.0	21-Au35676	Aug 16, 2021	Approximate Sample 74g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH10-0.3	21-Au35677	Aug 16, 2021	Approximate Sample 57g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH11-0.2	21-Au35678	Aug 16, 2021	Approximate Sample 111g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH12-0.3	21-Au35679	Aug 16, 2021	Approximate Sample 76g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH12-2.0	21-Au35680	Aug 16, 2021	Approximate Sample 77g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
0482359591	21-Au35681	Aug 16, 2021	Approximate Sample 85g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH13-2.0	21-Au35684	Aug 16, 2021	Approximate Sample 70g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
RB01	21-Au35747	Aug 16, 2021	Approximate Sample <1g / 300ml Sample consisted of: Brown residue and sand in water	No asbestos detected. * Organic fibre detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Water - Asbestos - LTM-ASB-8020	Sydney	Aug 19, 2021	Indefinite
Water - Asbestos - LTM-ASB-8020	Sydney	Aug 19, 2021	Indefinite
Solid - Asbestos - LTM-ASB-8020	Sydney	Aug 19, 2021	Indefinite
Solid - Asbestos - LTM-ASB-8020	Sydney	Aug 19, 2021	Indefinite

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NATA # 1261 Site # 20794

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Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/NOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)				
						Melbourne Laboratory - NATA Site # 1254					X	X							X			X	X				X		X
						Sydney Laboratory - NATA Site # 18217	X	X	X	X			X	X			X	X			X	X	X	X	X	X	X	X	X
						Brisbane Laboratory - NATA Site # 20794																							
						Perth Laboratory - NATA Site # 23736																							
						Mayfield Laboratory - NATA Site # 25079																							
						External Laboratory																							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																								
1	BH01-0.2	Aug 16, 2021		Soil	S21-Au35652	X					X						X	X			X								
2	BH01-2.0	Aug 16, 2021		Soil	S21-Au35653			X						X				X						X					
3	BH01-5.0	Aug 16, 2021		Soil	S21-Au35654			X						X				X						X					
4	BH02-0.15	Aug 16, 2021		Soil	S21-Au35655	X					X					X	X	X	X				X						
5	BH02-0.3	Aug 16, 2021		Soil	S21-Au35656	X					X						X	X			X								
6	BH02-0.5	Aug 16, 2021		Soil	S21-Au35657			X						X				X						X					
7	BH03-0.3	Aug 16, 2021		Soil	S21-Au35658	X					X					X	X	X	X				X						
8	BH03-0.5	Aug 16, 2021		Soil	S21-Au35659	X					X						X	X			X								
9	BH03-3.0	Aug 16, 2021		Soil	S21-Au35660			X						X				X						X					

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NSW 2001

Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/MOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
10	BH03-8.0	Aug 16, 2021		Soil	S21-Au35661			X						X				X							X
11	BH04-0.5	Aug 16, 2021		Soil	S21-Au35662	X					X					X	X	X	X				X		
12	BH04-2.0	Aug 16, 2021		Soil	S21-Au35663	X					X						X	X			X				
13	BH05-0.2	Aug 16, 2021		Soil	S21-Au35664	X			X		X		X				X	X			X				
14	BH05-0.5	Aug 16, 2021		Soil	S21-Au35665				X				X					X							
15	BH05-3.0	Aug 16, 2021		Soil	S21-Au35666				X				X					X							
16	BH05-5.0	Aug 16, 2021		Soil	S21-Au35667				X				X					X							
17	BH06-0.2	Aug 16, 2021		Soil	S21-Au35668	X					X						X	X			X				
18	BH07-0.1	Aug 16, 2021		Soil	S21-Au35669	X			X		X		X				X	X			X				
19	BH07-0.5	Aug 16, 2021		Soil	S21-Au35670				X				X					X							
20	BH07-3.0	Aug 16, 2021		Soil	S21-Au35671				X				X					X							

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
21	BH07-5.0	Aug 16, 2021		Soil	S21-Au35672				X				X					X							
22	BH8-0.2	Aug 16, 2021		Soil	S21-Au35673	X					X						X	X			X				
23	BH9-0.1	Aug 16, 2021		Soil	S21-Au35674	X					X				X	X	X	X	X				X		
24	BH9-0.3	Aug 16, 2021		Soil	S21-Au35675	X					X						X	X			X				
25	BH9-1.0	Aug 16, 2021		Soil	S21-Au35676	X					X						X	X			X				
26	BH10-0.3	Aug 16, 2021		Soil	S21-Au35677	X									X	X	X	X	X				X		
27	BH11-0.2	Aug 16, 2021		Soil	S21-Au35678	X					X						X	X	X				X		
28	BH12-0.3	Aug 16, 2021		Soil	S21-Au35679	X					X				X	X	X	X	X				X		
29	BH12-2.0	Aug 16, 2021		Soil	S21-Au35680	X					X						X	X			X				
30	0482359591	Aug 16, 2021		Soil	S21-Au35681	X					X						X	X	X				X		
31	BH13-0.5	Aug 16, 2021		Soil	S21-Au35682				X				X					X							

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
32	BH13-1.0	Aug 16, 2021		Soil	S21-Au35683				X				X					X							
33	BH13-2.0	Aug 16, 2021		Soil	S21-Au35684	X					X						X	X			X				
34	BH13-4.0	Aug 16, 2021		Soil	S21-Au35685				X				X					X							
35	BH13-7.0	Aug 16, 2021		Soil	S21-Au35686				X				X					X							
36	BH01-5.0	Aug 16, 2021		Soil	S21-Au35687							X													
37	BH01-1.0	Aug 16, 2021		Soil	S21-Au35688							X													
38	BH01-3.0	Aug 16, 2021		Soil	S21-Au35689							X													
39	BH01-4.0	Aug 16, 2021		Soil	S21-Au35690							X													
40	BH02-1.0	Aug 16, 2021		Soil	S21-Au35691							X													
41	BH02-2.0	Aug 16, 2021		Soil	S21-Au35692							X													
42	BH03-1.0	Aug 16, 2021		Soil	S21-Au35693							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
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External Laboratory																									
43	BH03-2.0	Aug 16, 2021		Soil	S21-Au35694							X													
44	BH03-4.0	Aug 16, 2021		Soil	S21-Au35695							X													
45	BH03-5.0	Aug 16, 2021		Soil	S21-Au35696							X													
46	BH03-6.0	Aug 16, 2021		Soil	S21-Au35697							X													
47	BH03-7.0	Aug 16, 2021		Soil	S21-Au35698							X													
48	BH03-9.0	Aug 16, 2021		Soil	S21-Au35699							X													
49	BH04-0.35	Aug 16, 2021		Soil	S21-Au35700							X													
50	BH04-1.0	Aug 16, 2021		Soil	S21-Au35701							X													
51	BH05-1.0	Aug 16, 2021		Soil	S21-Au35702							X													
52	BH05-2.0	Aug 16, 2021		Soil	S21-Au35703							X													
53	BH05-4.0	Aug 16, 2021		Soil	S21-Au35704							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
54	BH05-6.0	Aug 16, 2021		Soil	S21-Au35705							X													
55	BH05-7.0	Aug 16, 2021		Soil	S21-Au35706							X													
56	BH05-8.0	Aug 16, 2021		Soil	S21-Au35707							X													
57	BH05-9.0	Aug 16, 2021		Soil	S21-Au35708							X													
58	BH06-0.5	Aug 16, 2021		Soil	S21-Au35709							X													
59	BH06-1.0	Aug 16, 2021		Soil	S21-Au35710							X													
60	BH06-2.0	Aug 16, 2021		Soil	S21-Au35711							X													
61	BH07-1.0	Aug 16, 2021		Soil	S21-Au35712							X													
62	BH07-2.0	Aug 16, 2021		Soil	S21-Au35713							X													
63	BH07-4.0	Aug 16, 2021		Soil	S21-Au35714							X													
64	BH8-1.0	Aug 16, 2021		Soil	S21-Au35715							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
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External Laboratory																									
65	BH9-0.5	Aug 16, 2021		Soil	S21-Au35716							X													
66	BH9-2.0	Aug 16, 2021		Soil	S21-Au35717							X													
67	BH9-3.0	Aug 16, 2021		Soil	S21-Au35718							X													
68	BH9-4.0	Aug 16, 2021		Soil	S21-Au35719							X													
69	BH9-5.0	Aug 16, 2021		Soil	S21-Au35720							X													
70	BH9-6.0	Aug 16, 2021		Soil	S21-Au35721							X													
71	BH9-7.0	Aug 16, 2021		Soil	S21-Au35722							X													
72	BH9-8.0	Aug 16, 2021		Soil	S21-Au35723							X													
73	BH9-9.0	Aug 16, 2021		Soil	S21-Au35724							X													
74	BH9-10.0	Aug 16, 2021		Soil	S21-Au35725							X													
75	BH10-0.5	Aug 16, 2021		Soil	S21-Au35726							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
76	BH10-1.0	Aug 16, 2021		Soil	S21-Au35727							X													
77	BH10-2.0	Aug 16, 2021		Soil	S21-Au35728							X													
78	BH11-0.5	Aug 16, 2021		Soil	S21-Au35729							X													
79	BH11-1.0	Aug 16, 2021		Soil	S21-Au35730							X													
80	BH11-2.0	Aug 16, 2021		Soil	S21-Au35731							X													
81	BH12-0.5	Aug 16, 2021		Soil	S21-Au35732							X													
82	BH12-1.0	Aug 16, 2021		Soil	S21-Au35733							X													
83	BH13-3.0	Aug 16, 2021		Soil	S21-Au35734							X													
84	BH13-5.0	Aug 16, 2021		Soil	S21-Au35735							X													
85	BH13-6.0	Aug 16, 2021		Soil	S21-Au35736							X													
86	BH13-8.0	Aug 16, 2021		Soil	S21-Au35737							X													

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Order No.: 30071332
Report #: 818308
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Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity/ 1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
87	BH13-9.0	Aug 16, 2021		Soil	S21-Au35738							X													
88	BH13-10.0	Aug 16, 2021		Soil	S21-Au35739							X													
89	QA01	Aug 16, 2021		Soil	S21-Au35740							X													
90	QA02	Aug 16, 2021		Soil	S21-Au35741							X													
91	QA03	Aug 16, 2021		Soil	S21-Au35742							X													
92	QA04	Aug 16, 2021		Soil	S21-Au35743							X													
93	TRIP SPIKE	Aug 16, 2021		Soil	S21-Au35744																			X	
94	TRIP BLANK	Aug 16, 2021		Soil	S21-Au35746																	X			
95	RB01	Aug 16, 2021		Water	S21-Au35747		X			X						X	X			X			X		
Test Counts						21	1	5	12	1	22	57	12	6	3	8	22	35	9	1	12	1	10	1	5

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Au35677: The sample received was not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-sample to be analysed accurately represented the sample received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001



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Accreditation Number 1261
Site Number 18217

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Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: Imogen Powell

Report 818308-W
Project name CHARTER HALL GLENDENNING DRILLING WORKS
Project ID PS125811
Received Date Aug 19, 2021

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
Naphthalene ^{N02}	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	75
Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Volatile Organics			
1,3-Dichloropropane	0.001	mg/L	< 0.001
1,3,5-Trimethylbenzene	0.001	mg/L	< 0.001
1,4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001
Allyl chloride	0.001	mg/L	< 0.001
Benzene	0.001	mg/L	< 0.001
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.001	mg/L	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.001	mg/L	< 0.001
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.001	mg/L	< 0.001
cis-1,2-Dichloroethene	0.001	mg/L	< 0.001
cis-1,3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
trans-1,2-Dichloroethene	0.001	mg/L	< 0.001
trans-1,3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
Total MAH*	0.003	mg/L	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005
4-Bromofluorobenzene (surr.)	1	%	75
Toluene-d8 (surr.)	1	%	70

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Chlordanes - Total	0.002	mg/L	< 0.002
4,4'-DDD	0.0002	mg/L	< 0.0002
4,4'-DDE	0.0002	mg/L	< 0.0002
4,4'-DDT	0.0002	mg/L	< 0.0002
a-HCH	0.0002	mg/L	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002
b-HCH	0.0002	mg/L	< 0.0002
d-HCH	0.0002	mg/L	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002
Endrin	0.0002	mg/L	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002
Toxaphene	0.005	mg/L	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002
Dibutylchloroendate (surr.)	1	%	135
Tetrachloro-m-xylene (surr.)	1	%	146
Organophosphorus Pesticides			
Azinphos-methyl	0.002	mg/L	< 0.002
Bolstar	0.002	mg/L	< 0.002
Chlorfenvinphos	0.02	mg/L	< 0.02
Chlorpyrifos	0.002	mg/L	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	< 0.002
Coumaphos	0.02	mg/L	< 0.02
Demeton-S	0.002	mg/L	< 0.002
Demeton-O	0.002	mg/L	< 0.002
Diazinon	0.002	mg/L	< 0.002
Dichlorvos	0.002	mg/L	< 0.002
Dimethoate	0.002	mg/L	< 0.002
Disulfoton	0.002	mg/L	< 0.002
EPN	0.002	mg/L	< 0.002
Ethion	0.002	mg/L	< 0.002
Ethoprop	0.002	mg/L	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002
Fenitrothion	0.002	mg/L	< 0.002
Fensulfothion	0.002	mg/L	< 0.002
Fenthion	0.002	mg/L	< 0.002
Malathion	0.002	mg/L	< 0.002
Merphos	0.002	mg/L	< 0.002

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Methyl parathion	0.002	mg/L	< 0.002
Mevinphos	0.002	mg/L	< 0.002
Monocrotophos	0.002	mg/L	< 0.002
Naled	0.002	mg/L	< 0.002
Omethoate	0.02	mg/L	< 0.02
Phorate	0.002	mg/L	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02
Pyrazophos	0.002	mg/L	< 0.002
Ronnel	0.002	mg/L	< 0.002
Terbufos	0.002	mg/L	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002
Tokuthion	0.002	mg/L	< 0.002
Trichloronate	0.002	mg/L	< 0.002
Triphenylphosphate (surr.)	1	%	130
Polychlorinated Biphenyls			
Aroclor-1016	0.005	mg/L	< 0.005
Aroclor-1221	0.005	mg/L	< 0.005
Aroclor-1232	0.005	mg/L	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005
Aroclor-1248	0.005	mg/L	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005
Total PCB*	0.005	mg/L	< 0.001
Dibutylchloredate (surr.)	1	%	135
Tetrachloro-m-xylene (surr.)	1	%	146
Phenols (Halogenated)			
2-Chlorophenol	0.003	mg/L	< 0.003
2,4-Dichlorophenol	0.003	mg/L	< 0.003
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01
2,6-Dichlorophenol	0.003	mg/L	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01
Phenols (non-Halogenated)			
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	< 0.1
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01
2,4-Dimethylphenol	0.003	mg/L	< 0.003
2,4-Dinitrophenol	0.03	mg/L	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
Total cresols*	0.01	mg/L	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03
Dinoseb	0.1	mg/L	< 0.1
Phenol	0.003	mg/L	< 0.003
Phenol-d6 (surr.)	1	%	35
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005
1,2-Dichlorobenzene	0.005	mg/L	< 0.005
1,2,3-Trichlorobenzene	0.005	mg/L	< 0.005
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	< 0.005
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	< 0.005
1,2,4-Trichlorobenzene	0.005	mg/L	< 0.005
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	< 0.005
1,3-Dichlorobenzene	0.005	mg/L	< 0.005
1,3,5-Trichlorobenzene	0.005	mg/L	< 0.005
1,4-Dichlorobenzene	0.005	mg/L	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003
2-Fluorobiphenyl (surr.)	1	%	143
2-Methylnaphthalene	0.005	mg/L	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01
2-Picoline	0.005	mg/L	< 0.005
2,3,4,6-Tetrachlorophenol	0.01	mg/L	< 0.01
2,4-Dichlorophenol	0.003	mg/L	< 0.003
2,4-Dimethylphenol	0.003	mg/L	< 0.003
2,4-Dinitrophenol	0.03	mg/L	< 0.03
2,4-Dinitrotoluene	0.005	mg/L	< 0.005
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01
2,4,6-Tribromophenol (surr.)	1	%	INT
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01
2,6-Dichlorophenol	0.003	mg/L	< 0.003
2,6-Dinitrotoluene	0.005	mg/L	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005
3,3'-Dichlorobenzidine	0.005	mg/L	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03
4,4'-DDD	0.005	mg/L	< 0.005
4,4'-DDE	0.005	mg/L	< 0.005
4,4'-DDT	0.005	mg/L	< 0.005
7,12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005
a-HCH	0.005	mg/L	< 0.005
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Acetophenone	0.005	mg/L	< 0.005
Aldrin	0.005	mg/L	< 0.005
Aniline	0.005	mg/L	< 0.005

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
Anthracene	0.001	mg/L	< 0.001
b-HCH	0.005	mg/L	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005
Chrysene	0.001	mg/L	< 0.001
d-HCH	0.005	mg/L	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001
Dibenz(a,j)acridine	0.005	mg/L	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005
Dieldrin	0.005	mg/L	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005
Diphenylamine	0.005	mg/L	< 0.005
Endosulfan I	0.005	mg/L	< 0.005
Endosulfan II	0.005	mg/L	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005
Endrin	0.005	mg/L	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005
Endrin ketone	0.005	mg/L	< 0.005
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
g-HCH (Lindane)	0.005	mg/L	< 0.005
Heptachlor	0.005	mg/L	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001
Methoxychlor	0.005	mg/L	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005
Naphthalene	0.001	mg/L	< 0.001
Nitrobenzene	0.005	mg/L	< 0.005
Nitrobenzene-d5 (surr.)	1	%	INT
Pentachlorobenzene	0.005	mg/L	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005

Client Sample ID			RB01
Sample Matrix			Water
Eurofins Sample No.			S21-Au35747
Date Sampled			Aug 16, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
Pentachlorophenol	0.01	mg/L	< 0.01
Phenanthrene	0.001	mg/L	< 0.001
Phenol	0.003	mg/L	< 0.003
Phenol-d6 (surr.)	1	%	35
Pronamide	0.005	mg/L	< 0.005
Pyrene	0.001	mg/L	< 0.001
Trifluralin	0.005	mg/L	< 0.005
Formaldehyde	0.2	mg/L	< 0.2
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 19, 2021	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 19, 2021	7 Days
BTEX - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 19, 2021	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Aug 19, 2021	7 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Aug 19, 2021	7 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Aug 19, 2021	7 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Sydney	Aug 19, 2021	7 Days
Semivolatile Organics - Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS	Sydney	Aug 19, 2021	7 Day
Eurofins Suite B15			
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Aug 19, 2021	7 Days
Organophosphorus Pesticides - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS	Sydney	Aug 19, 2021	7 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Aug 19, 2021	7 Days
Formaldehyde - Method: Melbourne Water HMSO	Melbourne	Aug 21, 2021	7 Days
Eurofins Suite B6 (filtered metals)			
Metals M8 filtered - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Aug 23, 2021	28 Days

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Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
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Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID																				
1	BH01-0.2	Aug 16, 2021		Soil	S21-Au35652	X					X						X	X			X				
2	BH01-2.0	Aug 16, 2021		Soil	S21-Au35653			X						X				X						X	
3	BH01-5.0	Aug 16, 2021		Soil	S21-Au35654			X						X				X						X	
4	BH02-0.15	Aug 16, 2021		Soil	S21-Au35655	X					X					X	X	X	X				X		
5	BH02-0.3	Aug 16, 2021		Soil	S21-Au35656	X					X						X	X			X				
6	BH02-0.5	Aug 16, 2021		Soil	S21-Au35657			X						X				X						X	
7	BH03-0.3	Aug 16, 2021		Soil	S21-Au35658	X					X					X	X	X	X				X		
8	BH03-0.5	Aug 16, 2021		Soil	S21-Au35659	X					X						X	X			X				
9	BH03-3.0	Aug 16, 2021		Soil	S21-Au35660			X						X				X							

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Eurofins Analytical Services Manager : John Nguyen

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
10	BH03-8.0	Aug 16, 2021		Soil	S21-Au35661			X						X				X							X
11	BH04-0.5	Aug 16, 2021		Soil	S21-Au35662	X					X					X	X	X	X				X		
12	BH04-2.0	Aug 16, 2021		Soil	S21-Au35663	X					X						X	X			X				
13	BH05-0.2	Aug 16, 2021		Soil	S21-Au35664	X			X		X		X				X	X			X				
14	BH05-0.5	Aug 16, 2021		Soil	S21-Au35665				X				X					X							
15	BH05-3.0	Aug 16, 2021		Soil	S21-Au35666				X				X					X							
16	BH05-5.0	Aug 16, 2021		Soil	S21-Au35667				X				X					X							
17	BH06-0.2	Aug 16, 2021		Soil	S21-Au35668	X					X						X	X			X				
18	BH07-0.1	Aug 16, 2021		Soil	S21-Au35669	X			X		X		X				X	X			X				
19	BH07-0.5	Aug 16, 2021		Soil	S21-Au35670				X				X					X							
20	BH07-3.0	Aug 16, 2021		Soil	S21-Au35671				X				X					X							

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Eurofins Analytical Services Manager : John Nguyen

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
21	BH07-5.0	Aug 16, 2021		Soil	S21-Au35672				X				X					X							
22	BH8-0.2	Aug 16, 2021		Soil	S21-Au35673	X					X						X	X			X				
23	BH9-0.1	Aug 16, 2021		Soil	S21-Au35674	X					X				X	X	X	X	X				X		
24	BH9-0.3	Aug 16, 2021		Soil	S21-Au35675	X					X						X	X			X				
25	BH9-1.0	Aug 16, 2021		Soil	S21-Au35676	X					X						X	X			X				
26	BH10-0.3	Aug 16, 2021		Soil	S21-Au35677	X									X	X	X	X	X				X		
27	BH11-0.2	Aug 16, 2021		Soil	S21-Au35678	X					X						X	X	X				X		
28	BH12-0.3	Aug 16, 2021		Soil	S21-Au35679	X					X				X	X	X	X	X				X		
29	BH12-2.0	Aug 16, 2021		Soil	S21-Au35680	X					X						X	X			X				
30	0482359591	Aug 16, 2021		Soil	S21-Au35681	X					X						X	X	X				X		
31	BH13-0.5	Aug 16, 2021		Soil	S21-Au35682				X				X					X							

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
32	BH13-1.0	Aug 16, 2021		Soil	S21-Au35683				X				X					X							
33	BH13-2.0	Aug 16, 2021		Soil	S21-Au35684	X					X						X	X			X				
34	BH13-4.0	Aug 16, 2021		Soil	S21-Au35685				X				X					X							
35	BH13-7.0	Aug 16, 2021		Soil	S21-Au35686				X				X					X							
36	BH01-5.0	Aug 16, 2021		Soil	S21-Au35687							X													
37	BH01-1.0	Aug 16, 2021		Soil	S21-Au35688							X													
38	BH01-3.0	Aug 16, 2021		Soil	S21-Au35689							X													
39	BH01-4.0	Aug 16, 2021		Soil	S21-Au35690							X													
40	BH02-1.0	Aug 16, 2021		Soil	S21-Au35691							X													
41	BH02-2.0	Aug 16, 2021		Soil	S21-Au35692							X													
42	BH03-1.0	Aug 16, 2021		Soil	S21-Au35693							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
43	BH03-2.0	Aug 16, 2021		Soil	S21-Au35694							X													
44	BH03-4.0	Aug 16, 2021		Soil	S21-Au35695							X													
45	BH03-5.0	Aug 16, 2021		Soil	S21-Au35696							X													
46	BH03-6.0	Aug 16, 2021		Soil	S21-Au35697							X													
47	BH03-7.0	Aug 16, 2021		Soil	S21-Au35698							X													
48	BH03-9.0	Aug 16, 2021		Soil	S21-Au35699							X													
49	BH04-0.35	Aug 16, 2021		Soil	S21-Au35700							X													
50	BH04-1.0	Aug 16, 2021		Soil	S21-Au35701							X													
51	BH05-1.0	Aug 16, 2021		Soil	S21-Au35702							X													
52	BH05-2.0	Aug 16, 2021		Soil	S21-Au35703							X													
53	BH05-4.0	Aug 16, 2021		Soil	S21-Au35704							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
54	BH05-6.0	Aug 16, 2021		Soil	S21-Au35705							X													
55	BH05-7.0	Aug 16, 2021		Soil	S21-Au35706							X													
56	BH05-8.0	Aug 16, 2021		Soil	S21-Au35707							X													
57	BH05-9.0	Aug 16, 2021		Soil	S21-Au35708							X													
58	BH06-0.5	Aug 16, 2021		Soil	S21-Au35709							X													
59	BH06-1.0	Aug 16, 2021		Soil	S21-Au35710							X													
60	BH06-2.0	Aug 16, 2021		Soil	S21-Au35711							X													
61	BH07-1.0	Aug 16, 2021		Soil	S21-Au35712							X													
62	BH07-2.0	Aug 16, 2021		Soil	S21-Au35713							X													
63	BH07-4.0	Aug 16, 2021		Soil	S21-Au35714							X													
64	BH8-1.0	Aug 16, 2021		Soil	S21-Au35715							X													

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Company Name: WSP Australia P/L NSW
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NSW 2001

Order No.: 30071332
Report #: 818308
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 19, 2021 12:28 PM
Due: Aug 26, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING DRILLING WORKS
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chloride	Conductivity (1:5 aqueous extract at 25°C as rec.)	Formaldehyde	Formaldehyde (free)	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Sulphate (as SO4)	Chlorinated Hydrocarbons	Phenols (Speciated)	Eurofins Suite B15	Moisture Set	Eurofins Suite B6	Eurofins Suite B6 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOCNOC	BTEXN and Volatile TRH	Exchangeable Sodium Percentage (ESP)
Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
65	BH9-0.5	Aug 16, 2021		Soil	S21-Au35716							X													
66	BH9-2.0	Aug 16, 2021		Soil	S21-Au35717							X													
67	BH9-3.0	Aug 16, 2021		Soil	S21-Au35718							X													
68	BH9-4.0	Aug 16, 2021		Soil	S21-Au35719							X													
69	BH9-5.0	Aug 16, 2021		Soil	S21-Au35720							X													
70	BH9-6.0	Aug 16, 2021		Soil	S21-Au35721							X													
71	BH9-7.0	Aug 16, 2021		Soil	S21-Au35722							X													
72	BH9-8.0	Aug 16, 2021		Soil	S21-Au35723							X													
73	BH9-9.0	Aug 16, 2021		Soil	S21-Au35724							X													
74	BH9-10.0	Aug 16, 2021		Soil	S21-Au35725							X													
75	BH10-0.5	Aug 16, 2021		Soil	S21-Au35726							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
76	BH10-1.0	Aug 16, 2021		Soil	S21-Au35727							X													
77	BH10-2.0	Aug 16, 2021		Soil	S21-Au35728							X													
78	BH11-0.5	Aug 16, 2021		Soil	S21-Au35729							X													
79	BH11-1.0	Aug 16, 2021		Soil	S21-Au35730							X													
80	BH11-2.0	Aug 16, 2021		Soil	S21-Au35731							X													
81	BH12-0.5	Aug 16, 2021		Soil	S21-Au35732							X													
82	BH12-1.0	Aug 16, 2021		Soil	S21-Au35733							X													
83	BH13-3.0	Aug 16, 2021		Soil	S21-Au35734							X													
84	BH13-5.0	Aug 16, 2021		Soil	S21-Au35735							X													
85	BH13-6.0	Aug 16, 2021		Soil	S21-Au35736							X													
86	BH13-8.0	Aug 16, 2021		Soil	S21-Au35737							X													

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Melbourne Laboratory - NATA Site # 1254										X	X				X		X	X					X		X
Sydney Laboratory - NATA Site # 18217						X	X	X	X			X	X	X		X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
Mayfield Laboratory - NATA Site # 25079																									
External Laboratory																									
87	BH13-9.0	Aug 16, 2021		Soil	S21-Au35738							X													
88	BH13-10.0	Aug 16, 2021		Soil	S21-Au35739							X													
89	QA01	Aug 16, 2021		Soil	S21-Au35740							X													
90	QA02	Aug 16, 2021		Soil	S21-Au35741							X													
91	QA03	Aug 16, 2021		Soil	S21-Au35742							X													
92	QA04	Aug 16, 2021		Soil	S21-Au35743							X													
93	TRIP SPIKE	Aug 16, 2021		Soil	S21-Au35744																			X	
94	TRIP BLANK	Aug 16, 2021		Soil	S21-Au35746																	X			
95	RB01	Aug 16, 2021		Water	S21-Au35747		X			X						X	X			X			X		
Test Counts						21	1	5	12	1	22	57	12	6	3	8	22	35	9	1	12	1	10	1	5

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ug/L: micrograms per litre
ppm: Parts per million	ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDE	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDT	mg/L	< 0.0002			0.0002	Pass	
a-HCH	mg/L	< 0.0002			0.0002	Pass	
Aldrin	mg/L	< 0.0002			0.0002	Pass	
b-HCH	mg/L	< 0.0002			0.0002	Pass	
d-HCH	mg/L	< 0.0002			0.0002	Pass	
Dieldrin	mg/L	< 0.0002			0.0002	Pass	
Endosulfan I	mg/L	< 0.0002			0.0002	Pass	
Endosulfan II	mg/L	< 0.0002			0.0002	Pass	
Endosulfan sulphate	mg/L	< 0.0002			0.0002	Pass	
Endrin	mg/L	< 0.0002			0.0002	Pass	
Endrin aldehyde	mg/L	< 0.0002			0.0002	Pass	
Endrin ketone	mg/L	< 0.0002			0.0002	Pass	
g-HCH (Lindane)	mg/L	< 0.0002			0.0002	Pass	
Heptachlor	mg/L	< 0.0002			0.0002	Pass	
Heptachlor epoxide	mg/L	< 0.0002			0.0002	Pass	
Hexachlorobenzene	mg/L	< 0.0002			0.0002	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.005			0.005	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.002			0.002	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.02			0.02	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB*	mg/L	< 0.001			0.005	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2,4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2,4,5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2,4,6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2,6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4,6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2,4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2,4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.005			0.005	Pass	
1.2-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
2-Methylnaphthalene	mg/L	< 0.005			0.005	Pass	
2-Naphthylamine	mg/L	< 0.005			0.005	Pass	
2-Nitroaniline	mg/L	< 0.005			0.005	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
3-Methylcholanthrene	mg/L	< 0.005			0.005	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005			0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4.4'-DDD	mg/L	< 0.005			0.005	Pass	
4.4'-DDE	mg/L	< 0.005			0.005	Pass	
4.4'-DDT	mg/L	< 0.005			0.005	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.005			0.005	Pass	
a-HCH	mg/L	< 0.005			0.005	Pass	
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Acetophenone	mg/L	< 0.005			0.005	Pass	
Aldrin	mg/L	< 0.005			0.005	Pass	
Aniline	mg/L	< 0.005			0.005	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
b-HCH	mg/L	< 0.005			0.005	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005			0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005			0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005			0.005	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
d-HCH	mg/L	< 0.005			0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005			0.005	Pass	
Di-n-octyl phthalate	mg/L	< 0.005			0.005	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/L	< 0.005			0.005	Pass	
Diethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005			0.005	Pass	
Diphenylamine	mg/L	< 0.005			0.005	Pass	
Endosulfan I	mg/L	< 0.005			0.005	Pass	
Endosulfan II	mg/L	< 0.005			0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005			0.005	Pass	
Endrin	mg/L	< 0.005			0.005	Pass	
Endrin aldehyde	mg/L	< 0.005			0.005	Pass	
Endrin ketone	mg/L	< 0.005			0.005	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
g-HCH (Lindane)	mg/L	< 0.005			0.005	Pass	
Heptachlor	mg/L	< 0.005			0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005			0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005			0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005			0.005	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005			0.005	Pass	
Hexachloroethane	mg/L	< 0.005			0.005	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005			0.005	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.005			0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005			0.005	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Formaldehyde	mg/L	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	75			70-130	Pass	
Naphthalene	%	101			70-130	Pass	
TRH C6-C10	%	83			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
BTEX							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	%	113			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	109			70-130	Pass	
m&p-Xylenes	%	114			70-130	Pass	
o-Xylene	%	112			70-130	Pass	
Xylenes - Total*	%	113			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	91			70-130	Pass	
1.1.1-Trichloroethane	%	93			70-130	Pass	
1.2-Dichlorobenzene	%	101			70-130	Pass	
1.2-Dichloroethane	%	99			70-130	Pass	
Trichloroethene	%	88			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	89			70-130	Pass	
4.4'-DDD	%	88			70-130	Pass	
4.4'-DDE	%	89			70-130	Pass	
4.4'-DDT	%	96			70-130	Pass	
a-HCH	%	84			70-130	Pass	
Aldrin	%	76			70-130	Pass	
b-HCH	%	88			70-130	Pass	
d-HCH	%	89			70-130	Pass	
Dieldrin	%	88			70-130	Pass	
Endosulfan I	%	89			70-130	Pass	
Endosulfan II	%	83			70-130	Pass	
Endosulfan sulphate	%	93			70-130	Pass	
Endrin	%	82			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	95			70-130	Pass	
g-HCH (Lindane)	%	83			70-130	Pass	
Heptachlor	%	88			70-130	Pass	
Heptachlor epoxide	%	80			70-130	Pass	
Hexachlorobenzene	%	84			70-130	Pass	
Methoxychlor	%	90			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	93			70-130	Pass	
Dimethoate	%	73			70-130	Pass	
Ethion	%	112			70-130	Pass	
Fenitrothion	%	85			70-130	Pass	
Methyl parathion	%	97			70-130	Pass	
Mevinphos	%	103			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	54			30-130	Pass	
2.4-Dichlorophenol	%	86			30-130	Pass	
2.4.5-Trichlorophenol	%	90			30-130	Pass	
2.4.6-Trichlorophenol	%	84			30-130	Pass	
2.6-Dichlorophenol	%	83			30-130	Pass	
4-Chloro-3-methylphenol	%	75			30-130	Pass	
Tetrachlorophenols - Total	%	84			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Cyclohexyl-4,6-dinitrophenol			%	77			30-130	Pass	
2-Methyl-4,6-dinitrophenol			%	82			30-130	Pass	
2-Nitrophenol			%	82			30-130	Pass	
2,4-Dimethylphenol			%	89			30-130	Pass	
2,4-Dinitrophenol			%	74			30-130	Pass	
2-Methylphenol (o-Cresol)			%	73			30-130	Pass	
Dinoseb			%	81			30-130	Pass	
LCS - % Recovery									
Semivolatile Organics									
1,2,4-Trichlorobenzene			%	80			70-130	Pass	
1,4-Dichlorobenzene			%	74			70-130	Pass	
2,4-Dinitrotoluene			%	71			70-130	Pass	
Acenaphthene			%	91			70-130	Pass	
Acenaphthylene			%	92			70-130	Pass	
Anthracene			%	78			70-130	Pass	
Benz(a)anthracene			%	117			70-130	Pass	
Benzo(a)pyrene			%	101			70-130	Pass	
Benzo(b&j)fluoranthene			%	100			70-130	Pass	
Benzo(g,h,i)perylene			%	104			70-130	Pass	
Benzo(k)fluoranthene			%	103			70-130	Pass	
Chrysene			%	123			70-130	Pass	
Dibenz(a,h)anthracene			%	93			70-130	Pass	
Fluoranthene			%	89			70-130	Pass	
Fluorene			%	91			70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	101			70-130	Pass	
N-Nitrosodipropylamine			%	88			70-130	Pass	
Naphthalene			%	101			70-130	Pass	
Phenanthrene			%	95			70-130	Pass	
Pyrene			%	98			70-130	Pass	
LCS - % Recovery									
Formaldehyde			%	94			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic (filtered)			%	107			80-120	Pass	
Cadmium (filtered)			%	99			80-120	Pass	
Chromium (filtered)			%	111			80-120	Pass	
Copper (filtered)			%	114			80-120	Pass	
Lead (filtered)			%	105			80-120	Pass	
Mercury (filtered)			%	116			80-120	Pass	
Nickel (filtered)			%	112			80-120	Pass	
Zinc (filtered)			%	109			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	W21-Au34717	NCP	%	79			70-130	Pass	
TRH C10-C14	S21-Au46735	NCP	%	90			70-130	Pass	
Naphthalene	W21-Au34717	NCP	%	100			70-130	Pass	
TRH C6-C10	W21-Au34717	NCP	%	76			70-130	Pass	
TRH >C10-C16	S21-Au46735	NCP	%	111			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	W21-Au34717	NCP	%	80			70-130	Pass	
Toluene	W21-Au34717	NCP	%	91			70-130	Pass	
Ethylbenzene	W21-Au34717	NCP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	W21-Au34717	NCP	%	96			70-130	Pass	
o-Xylene	W21-Au34717	NCP	%	95			70-130	Pass	
Xylenes - Total*	W21-Au34717	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Au44387	NCP	%	126			70-130	Pass	
1.1.1-Trichloroethane	S21-Au44387	NCP	%	120			70-130	Pass	
1.2-Dichlorobenzene	S21-Au44387	NCP	%	98			70-130	Pass	
1.2-Dichloroethane	S21-Au44387	NCP	%	119			70-130	Pass	
Trichloroethene	S21-Au44387	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Aldrin	S21-Au40506	NCP	%	124			70-130	Pass	
Hexachlorobenzene	S21-Au40506	NCP	%	127			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-Au40506	NCP	%	80			70-130	Pass	
Aroclor-1260	S21-Au40506	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium (filtered)	S21-Au40050	NCP	%	101			75-125	Pass	
Chromium (filtered)	S21-Au40050	NCP	%	100			75-125	Pass	
Copper (filtered)	S21-Au40050	NCP	%	92			75-125	Pass	
Lead (filtered)	S21-Au40050	NCP	%	92			75-125	Pass	
Mercury (filtered)	S21-Au40050	NCP	%	106			75-125	Pass	
Nickel (filtered)	S21-Au40050	NCP	%	94			75-125	Pass	
Zinc (filtered)	S21-Au40050	NCP	%	95			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Au38786	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S21-Au36120	NCP	mg/L	0.57	0.49	16	30%	Pass	
TRH C15-C28	S21-Au36120	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Au36120	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	S21-Au38786	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Au38786	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S21-Au36120	NCP	mg/L	0.55	0.47	16	30%	Pass	
TRH >C16-C34	S21-Au36120	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Au36120	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Au38786	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Au38786	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1.2.2-Tetrachloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Propanone (Acetone)	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chlorotoluene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Allyl chloride	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon disulfide	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroform	S21-Au38786	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.2-Dichloroethene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iodomethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Styrene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vinyl chloride	S21-Au38786	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
4.4'-DDD	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
4.4'-DDE	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
4.4'-DDT	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
a-HCH	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Aldrin	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
b-HCH	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
d-HCH	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Dieldrin	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endosulfan I	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endosulfan II	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endosulfan sulphate	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin aldehyde	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin ketone	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
g-HCH (Lindane)	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Heptachlor	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Heptachlor epoxide	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Hexachlorobenzene	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Methoxychlor	S21-Au40507	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Toxaphene	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Bolstar	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Chlorfenvinphos	S21-Au40507	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Chlorpyrifos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Chlorpyrifos-methyl	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Coumaphos	S21-Au40507	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Demeton-S	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Demeton-O	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Diazinon	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Dichlorvos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Dimethoate	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Disulfoton	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
EPN	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethoprop	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethyl parathion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fenitrothion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fensulfthion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fenthion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Malathion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Merphos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Methyl parathion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Mevinphos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Monocrotophos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Naled	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Omethoate	S21-Au40507	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Phorate	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Pirimiphos-methyl	S21-Au40507	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Pyrazophos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ronnel	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Terbufos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Tetrachlorvinphos	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Tokuthion	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Trichloronate	S21-Au40507	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1221	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1232	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1242	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1248	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1254	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Aroclor-1260	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Total PCB*	S21-Au40507	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Semivolatile Organics				Result 1	Result 2	RPD		
Acenaphthene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b&j)fluoranthene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(g,h,i)perylene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(k)fluoranthene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Pyrene	S21-Au40507	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic (filtered)	M21-Au37567	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Cadmium (filtered)	M21-Au37567	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Chromium (filtered)	M21-Au37567	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Copper (filtered)	M21-Au37567	NCP	mg/L	0.006	0.006	4.0	30%	Pass
Lead (filtered)	M21-Au37567	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Mercury (filtered)	M21-Au37567	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	M21-Au37567	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Zinc (filtered)	M21-Au37567	NCP	mg/L	0.005	0.005	3.0	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

John Nguyen	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2130432

Client : WSP Australia Pty Ltd Contact : MS IMOGEN POWELL Address : LEVEL 27 680 GEORGE STREET SYDNEY 2000 E-mail : Imogen.Powell@wsp.com Telephone : ---- Facsimile : ---- Project : PS125811 Charter Hall, Glendenning Drilling Works Order number : 30071332 C-O-C number : ---- Site : ---- Sampler : ----	Laboratory : Environmental Division Sydney Contact : Christopher Redford Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 E-mail : Christopher.Redford@ALSGlobal.com Telephone : +61 2 8784 8555 Facsimile : +61-2-8784 8500 Page : 1 of 2 Quote number : ES2020PARBRINSW0007 (EN/008/20) QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 20-Aug-2021 15:00	Issue Date : 23-Aug-2021
Client Requested Due Date : 26-Aug-2021	Scheduled Reporting Date : 26-Aug-2021

Delivery Details

Mode of Delivery : Carrier	Security Seal : Intact.
No. of coolers/boxes : 1	Temperature : 5.6 - Ice present
Receipt Detail :	No. of samples received / analysed : 4 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

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

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

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

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

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EP010 (Solids) - Default Formaldehyde (LOR 2ppm)	SOIL - EP075 SIM Phenols only SIM - Phenols only	SOIL - S-05 TRH/BTEXN/8 Metals	SOIL - S-13 OC/OP/PCB	SOIL - S-23 minus BTEXN SVOC/VOC minus BTEXN
ES2130432-001	16-Aug-2021 00:00	QA01A	✓						
ES2130432-002	17-Aug-2021 00:00	QA02A		✓	✓	✓	✓	✓	✓
ES2130432-003	17-Aug-2021 00:00	QA03A	✓						
ES2130432-004	18-Aug-2021 00:00	QA04A	✓						

Proactive Holding Time Report

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

Requested Deliverables

CLAIRE WILLIAMSON

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

ESDAT REPORTS

- EDI Format - ESDAT (ESDAT)	Email	wsp@esdat.com.au

IMOGEN POWELL

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

INVOICES

- A4 - AU Tax Invoice (INV)	Email	au.accountspayable@wsp.com

CERTIFICATE OF ANALYSIS

Work Order : **ES2130432**
Client : **WSP Australia Pty Ltd**
Contact : **MS IMOGEN POWELL**
Address : **LEVEL 27 680 GEORGE STREET**
 SYDNEY 2000
Telephone : ----
Project : **PS125811 Charter Hall, Glendenning Drilling Works**
Order number : **30071332**
C-O-C number : ----
Sampler : ----
Site : ----
Quote number : **EN/008/20**
No. of samples received : **4**
No. of samples analysed : **1**

Page : 1 of 12
Laboratory : Environmental Division Sydney
Contact : Christopher Redford
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 20-Aug-2021 15:00
Date Analysis Commenced : 23-Aug-2021
Issue Date : 26-Aug-2021 20:27



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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID		QA02A	----	----	----	----
Sampling date / time		17-Aug-2021 00:00		----	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2130432-002	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	9.3	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	7	----	----	----	----
Copper	7440-50-8	5	mg/kg	8	----	----	----	----
Lead	7439-92-1	5	mg/kg	<5	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg	6	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP010: Formaldehyde								
Formaldehyde	50-00-0	2	mg/kg	<2	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	----	----	----	----
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	----	----	----	----
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
				Result	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	----	----
EP074D: Fumigants									
2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	----	----
1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	----	----
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	----	----
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	----	----
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	----	----
1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	----	----
1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	----	----
1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	----	----
1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	----	----	----
1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg		<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
				Result	----	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	91-57-6	0.5	mg/kg		<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg		<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg		<0.5	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		<0.5	----	----	----	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg		<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		<0.5	----	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		<0.5	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg		<0.5	----	----	----	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg		<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg		<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg		<0.5	----	----	----	----
2,6-Dinitrotoluene	606-20-2	1.0	mg/kg		<1.0	----	----	----	----
2,4-Dinitrotoluene	121-14-2	1.0	mg/kg		<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg		<1	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
					Result	----	----	----	----
EP075E: Nitroaromatics and Ketones - Continued									
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg		<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg		<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		<0.5	----	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	----	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	----	----	----	----
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	----	----	----	----
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		<0.5	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	----	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg		<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg		<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg		<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg		<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg		<0.5	----	----	----	----
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg		<0.5	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		<0.5	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
					Result	----	----	----	----
EP075I: Organochlorine Pesticides - Continued									
beta-BHC	319-85-7	0.5	mg/kg		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	mg/kg		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg		<0.5	----	----	----	----
4,4'-DDE	72-55-9	0.5	mg/kg		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg		<0.5	----	----	----	----
Endrin	72-20-8	0.5	mg/kg		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg		<0.5	----	----	----	----
4,4'-DDD	72-54-8	0.5	mg/kg		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg		<0.5	----	----	----	----
4,4'-DDT	50-29-3	1.0	mg/kg		<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg		<0.5	----	----	----	----
Fenthion	55-38-9	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
Sampling date / time					17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
Result						----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ C6 - C10 Fraction minus BTEX (F1)				C6_C10-BTEX	10	mg/kg	<10	----	----
>C10 - C16 Fraction				----	50	mg/kg	<50	----	----
>C16 - C34 Fraction				----	100	mg/kg	<100	----	----
>C34 - C40 Fraction				----	100	mg/kg	<100	----	----
^ >C10 - C40 Fraction (sum)				----	50	mg/kg	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)				----	50	mg/kg	<50	----	----
EP080: BTEXN									
Benzene				71-43-2	0.2	mg/kg	<0.2	----	----
Toluene				108-88-3	0.5	mg/kg	<0.5	----	----
Ethylbenzene				100-41-4	0.5	mg/kg	<0.5	----	----
meta- & para-Xylene				108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----
ortho-Xylene				95-47-6	0.5	mg/kg	<0.5	----	----
^ Sum of BTEX				----	0.2	mg/kg	<0.2	----	----
^ Total Xylenes				----	0.5	mg/kg	<0.5	----	----
Naphthalene				91-20-3	1	mg/kg	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl				2051-24-3	0.1	%	93.0	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE				21655-73-2	0.05	%	90.4	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF				78-48-8	0.05	%	63.9	----	----
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4				17060-07-0	0.5	%	91.6	----	----
Toluene-D8				2037-26-5	0.5	%	90.8	----	----
4-Bromofluorobenzene				460-00-4	0.5	%	92.2	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6				13127-88-3	0.5	%	97.7	----	----
2-Chlorophenol-D4				93951-73-6	0.5	%	96.8	----	----
2,4,6-Tribromophenol				118-79-6	0.5	%	72.2	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl				321-60-8	0.5	%	95.1	----	----
Anthracene-d10				1719-06-8	0.5	%	110	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA02A	----	----	----	----
				Sampling date / time	17-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130432-002	-----	-----	-----	-----
					Result	----	----	----	----
EP075(SIM)T: PAH Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.5	%		104	----	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		121	----	----	----	----
Phenol-d6	13127-88-3	0.5	%		108	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		110	----	----	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		73.5	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		100	----	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	0.5	%		104	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		116	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		124	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		105	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		89.0	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		86.6	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		91.0	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	29	149
Phenol-d6	13127-88-3	32	128
2-Chlorophenol-D4	93951-73-6	32	128
2,4,6-Tribromophenol	118-79-6	13	121
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	33	125
1,2-Dichlorobenzene-D4	2199-69-1	34	108
2-Fluorobiphenyl	321-60-8	35	121
Anthracene-d10	1719-06-8	35	123
4-Terphenyl-d14	1718-51-0	33	125
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

QUALITY CONTROL REPORT

Work Order	: ES2130432	Page	: 1 of 17
Client	: WSP Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS IMOGEN POWELL	Contact	: Christopher Redford
Address	: LEVEL 27 680 GEORGE STREET SYDNEY 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: PS125811 Charter Hall, Glendenning Drilling Works	Date Samples Received	: 20-Aug-2021
Order number	: 30071332	Date Analysis Commenced	: 23-Aug-2021
C-O-C number	: ----	Issue Date	: 26-Aug-2021
Sampler	: ----		
Site	: ----		
Quote number	: EN/008/20		
No. of samples received	: 4		
No. of samples analysed	: 1		



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

This Quality Control Report contains the following information:

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

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

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

Laboratory Duplicate (DUP) Report

Sub-Matrix: SOIL

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3863990)									
ES2130297-014	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	36	30	18.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	10	13	33.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	12	11	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	28	17	47.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	24	9.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	35	50	34.4	No Limit
ES2130297-024	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	26	16.4	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	13	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	16	15	8.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	29	30	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	43	51	17.1	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	215	223	3.6	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3863994)									
ES2130297-019	Anonymous	EA055: Moisture Content	----	0.1	%	13.2	14.4	9.0	0% - 50%
ES2130427-003	Anonymous	EA055: Moisture Content	----	0.1	%	15.2	16.1	6.2	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3863991)									
ES2130297-014	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2130297-024	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP010: Formaldehyde (QC Lot: 3864462)									
ES2130432-002	QA02A	EP010: Formaldehyde	50-00-0	2	mg/kg	<2	<2	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3861238)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3861238) - continued									
ES2130432-002	QA02A	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3861235)									
ES2130432-002	QA02A	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3861235)									
ES2130432-002	QA02A	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3861235) - continued									
ES2130432-002	QA02A	EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3861402) - continued									
ES2130432-002	QA02A	EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 3861402)									
ES2130432-002	QA02A	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3861239)									
ES2130432-002	QA02A	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
			122-39-4						
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075E: Nitroaromatics and Ketones (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075F: Haloethers (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.0	No Limit		
EP075H: Anilines and Benzidines (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 3,3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: 4,4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075J: Organophosphorus Pesticides (QC Lot: 3861237)									
ES2130432-002	QA02A	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
	EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3861236)									
ES2130432-002	QA02A	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3861403)									
ES2130432-002	QA02A	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3861236)									
ES2130432-002	QA02A	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3861403)									
ES2130432-002	QA02A	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 3861403)									
ES2130432-002	QA02A	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit



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

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

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3863990)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	102	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	108	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	120	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	104	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	108	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	98.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3863991)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	112	70.0	125
EP010: Formaldehyde (QCLot: 3864462)								
EP010: Formaldehyde	50-00-0	2	mg/kg	<2	10 mg/kg	87.0	74.0	116
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3861238)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	109	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3861235)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.4	66.0	116
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.2	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	69.0	115
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	62.0	124
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	78.8	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	64.0	122



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 3861235) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	77.5	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3861235)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	90.4	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	107	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	95.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	88.8	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.9	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	102	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3861402)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	99.4	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	99.6	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	93.7	66.0	122
EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	95.9	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	95.1	69.0	119
EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	92.8	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	96.9	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	94.4	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	87.6	59.0	125
EP074B: Oxygenated Compounds (QCLot: 3861402)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	100	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	60.1	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	107	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	56.8	54.0	136
EP074C: Sulfonated Compounds (QCLot: 3861402)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	86.6	54.0	126



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP074D: Fumigants (QCLot: 3861402)								
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	93.9	60.0	126
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	124
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	97.4	51.0	119
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	97.2	52.0	114
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	99.5	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3861402)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	59.0	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	75.2	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	83.4	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	82.7	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	81.9	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	94.0	49.0	135
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	87.1	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	63.3	43.0	129
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	92.4	64.0	120
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	98.7	67.0	125
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	95.9	69.0	121
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	98.0	65.0	117
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	99.3	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	94.0	59.0	125
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	110	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	103	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	105	68.0	118
EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	111	64.0	126
EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	105	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	78.0	67.0	143
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	102	62.0	122
EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	85.6	54.0	128
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	92.7	55.0	129
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	116	65.0	121
EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	97.3	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	109	19.8	134
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	100	53.0	129
EP074F: Halogenated Aromatic Compounds (QCLot: 3861402)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	97.3	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	97.4	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	97.4	67.0	123
EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	92.9	52.0	122



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP074G: Trihalomethanes (QCLot: 3861402)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	102	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	105	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	99.3	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	95.2	60.0	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3861239)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	95.4	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	96.7	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	89.9	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	86.9	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	89.2	54.0	114
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	95.9	68.0	126
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	95.2	66.0	120
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	98.5	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	90.3	70.0	116
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	93.7	54.0	114
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	91.6	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	27.2	10.0	57.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3861237)								
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	114	58.0	116
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	# 119	54.0	112
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	102	58.0	114
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	103	48.1	106
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	50.0	116
EP075C: Phthalate Esters (QCLot: 3861237)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 122	60.0	118
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.8	65.0	115
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	98.4	65.0	121
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	101	62.0	116
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	mg/kg	----	1.5 mg/kg	101	69.0	133
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	102	62.0	124
EP075D: Nitrosamines (QCLot: 3861237)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	78.9	39.4	124
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	71.1	59.0	117
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	81.3	53.0	125
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	77.9	65.0	121
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	72.6	59.0	123
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	76.1	57.0	115
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 120	57.0	119

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP075D: Nitrosamines (QCLot: 3861237) - continued								
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.6	3 mg/kg	104	42.0	112
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	40.1	16.3	123
EP075E: Nitroaromatics and Ketones (QCLot: 3861237)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	68.2	27.3	129
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	72.3	60.0	116
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	76.7	65.0	119
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	71.9	62.0	116
EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	116	58.0	118
EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	104	59.0	115
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	98.6	18.0	112
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	64.4	10.0	87.0
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	88.6	48.3	98.5
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	102	62.0	118
EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	76.5	36.0	114
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	99.9	62.0	114
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	78.9	36.1	102
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	56.0	110
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	90.4	54.0	110
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	102	48.0	108
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	57.4	112
EP075F: Haloethers (QCLot: 3861237)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	74.2	63.0	121
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	74.6	59.0	115
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	105	58.0	112
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	106	58.0	110
EP075G: Chlorinated Hydrocarbons (QCLot: 3861237)								
EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	78.1	58.0	112
EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	63.3	58.0	116
EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	65.3	57.0	115
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	70.3	54.0	116
EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	71.4	62.9	108
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	93.9	39.1	110
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	96.0	59.0	117
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	53.0	24.3	108
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	94.7	57.0	109
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	106	59.0	111
EP075H: Anilines and Benzidines (QCLot: 3861237)								



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075H: Anilines and Benzidines (QCLot: 3861237) - continued								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	62.8	13.2	108
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	69.4	20.5	99.0
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	# 124	52.0	112
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	86.3	31.5	93.7
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	104	60.0	110
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	90.4	42.0	112
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	96.6	59.0	111
EP075: 3,3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	23.1	113
EP075I: Organochlorine Pesticides (QCLot: 3861237)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	104	63.0	113
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	99.4	57.0	113
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	105	61.0	117
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.4	64.0	118
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	94.9	55.0	115
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	61.0	115
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	95.4	56.0	118
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	95.4	65.0	125
EP075: 4,4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	98.2	60.0	116
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	98.4	64.0	118
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	98.0	53.0	117
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	103	65.0	115
EP075: 4,4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	96.7	62.0	118
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	121	63.0	129
EP075: 4,4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	97.0	46.0	122
EP075J: Organophosphorus Pesticides (QCLot: 3861237)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	110	46.0	112
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	106	63.0	119
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	90.6	68.0	134
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	93.8	60.0	130
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	106	65.0	127
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	98.8	60.0	116
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	95.1	63.0	113
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	95.3	65.0	115
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	94.2	59.0	103
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	97.9	59.0	119
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	102	62.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3861236)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	100	75.0	129

Laboratory Control Spike (LCS) Report

Matrix Spike (MS) Report

				Initial Spike (mg/kg) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3863990)							
ES2130297-014	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	94.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	88.8	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	92.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.1	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	109	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3863991)							
ES2130297-014	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	102	70.0	130
EP010: Formaldehyde (QCLot: 3864462)							



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP010: Formaldehyde (QCLot: 3864462) - continued							
ES2130432-002	QA02A	EP010: Formaldehyde	50-00-0	12.5 mg/kg	108	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3861238)							
ES2130432-002	QA02A	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	103	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3861235)							
ES2130432-002	QA02A	EP068: gamma-BHC	58-89-9	0.5 mg/kg	87.8	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	76.7	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	92.4	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	87.8	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	92.4	70.0	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	78.1	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3861235)							
ES2130432-002	QA02A	EP068: Diazinon	333-41-5	0.5 mg/kg	97.9	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	83.4	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	75.6	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	80.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	76.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3861402)							
ES2130432-002	QA02A	EP074: 1,1-Dichloroethene	75-35-4	2.5 mg/kg	83.3	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	92.4	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3861402)							
ES2130432-002	QA02A	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	97.9	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3861239)							
ES2130432-002	QA02A	EP075(SIM): Phenol	108-95-2	10 mg/kg	92.8	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	99.1	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	99.1	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	93.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	47.4	20.0	130
EP075D: Nitrosamines (QCLot: 3861237)							
ES2130432-002	QA02A	EP075: N-Nitrosodi-n-propylamine	621-64-7	10 mg/kg	97.3	50.0	130
EP075E: Nitroaromatics and Ketones (QCLot: 3861237)							
ES2130432-002	QA02A	EP075: 2,4-Dinitrotoluene	121-14-2	10 mg/kg	103	40.0	130
EP075G: Chlorinated Hydrocarbons (QCLot: 3861237)							
ES2130432-002	QA02A	EP075: 1,4-Dichlorobenzene	106-46-7	10 mg/kg	95.5	60.0	130
		EP075: 1,2,4-Trichlorobenzene	120-82-1	10 mg/kg	90.6	50.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3861236)							
ES2130432-002	QA02A						

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 Work Order : ES2130432
 Client : WSP Australia Pty Ltd
 Project : PS125811 Charter Hall, Glendenning Drilling Works



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3861236) - continued							
ES2130432-002	QA02A	EP071: C10 - C14 Fraction	----	480 mg/kg	114	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	111	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	116	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3861403)							
ES2130432-002	QA02A	EP080: C6 - C9 Fraction	----	32.5 mg/kg	93.5	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3861236)							
ES2130432-002	QA02A	EP071: >C10 - C16 Fraction	----	860 mg/kg	115	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	115	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	101	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3861403)							
ES2130432-002	QA02A	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	99.5	70.0	130
EP080: BTEXN (QCLot: 3861403)							
ES2130432-002	QA02A	EP080: Benzene	71-43-2	2.5 mg/kg	91.2	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	89.7	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	86.3	70.0	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	91.7	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	95.9	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	86.8	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2130432	Page	: 1 of 8
Client	: WSP Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS IMOGEN POWELL	Telephone	: +61 2 8784 8555
Project	: PS125811 Charter Hall, Glendenning Drilling Works	Date Samples Received	: 20-Aug-2021
Site	: ----	Issue Date	: 26-Aug-2021
Sampler	: ----	No. of samples received	: 4
Order number	: 30071332	No. of samples analysed	: 1

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3861237-002	----	2-Chloronaphthalene	91-58-7	119 %	54.0-112%	Recovery greater than upper control limit
EP075C: Phthalate Esters	QC-3861237-002	----	Dimethyl phthalate	131-11-3	122 %	60.0-118%	Recovery greater than upper control limit
EP075D: Nitrosamines	QC-3861237-002	----	N-Nitrosodibutylamine	924-16-3	120 %	57.0-119%	Recovery greater than upper control limit
EP075H: Anilines and Benzidines	QC-3861237-002	----	2-Nitroaniline	88-74-4	124 %	52.0-112%	Recovery greater than upper control limit

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075T: Base/Neutral Extractable Surrogates	ES2130432-002	QA02A	Anthracene-d10	1719-06-8	124 %	35.0-123 %	Recovery greater than upper data quality objective

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QA02A	17-Aug-2021	----	----	----	24-Aug-2021	31-Aug-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QA02A	17-Aug-2021	24-Aug-2021	13-Feb-2022	✓	25-Aug-2021	13-Feb-2022	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QA02A	17-Aug-2021	24-Aug-2021	14-Sep-2021	✓	26-Aug-2021	14-Sep-2021	✓
EP010: Formaldehyde							
Soil Glass Jar - Unpreserved (EP010) QA02A	17-Aug-2021	25-Aug-2021	13-Feb-2022	✓	25-Aug-2021	13-Feb-2022	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QA02A	17-Aug-2021	23-Aug-2021	24-Aug-2021	✓	24-Aug-2021	24-Aug-2021	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓



Matrix: **SOIL**

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

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QA02A	17-Aug-2021	23-Aug-2021	31-Aug-2021	✓	24-Aug-2021	31-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP071) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QA02A	17-Aug-2021	23-Aug-2021	31-Aug-2021	✓	24-Aug-2021	31-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP071) QA02A	17-Aug-2021	24-Aug-2021	31-Aug-2021	✓	25-Aug-2021	03-Oct-2021	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QA02A	17-Aug-2021	23-Aug-2021	31-Aug-2021	✓	24-Aug-2021	31-Aug-2021	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Formaldehyde	EP010	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Formaldehyde	EP010	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Formaldehyde	EP010	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Formaldehyde	EP010	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Page : 6 of 8
 Work Order : ES2130432
 Client : WSP Australia Pty Ltd
 Project : PS125811 Charter Hall, Glendenning Drilling Works



Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Formaldehyde	EP010	SOIL	In house: Referenced to ASTM D 6303-98. Determined on 1:5 soil / water extracts by colourimetry using NASH reagent. The Hantzsch reaction method is based on the reaction of acetylacetone with formaldehyde in the presence of excess ammonium acetate to form a coloured compound.
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Preparation Methods	Method	Matrix	Method Descriptions



Preparation Methods	Method	Matrix	Method Descriptions
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.



CHAIN OF CUSTODY RECORD

ABN 50 605 035 521

Sydney Laboratory
Unit F3 Bld F, 18 Mars Rd, Lane Cove West, NSW 2086
02 8900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Muramba, QLD 4172 Unit 2, 91 Leach Highway, Kewdale WA 6105
07 3802 4600 EnviroSampleQLD@eurofins.com 08 9251 9500 EnviroSampleWA@eurofins.com

Perth Laboratory

Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company		WSP Australia Pty Limited		Project No		PS125811		Project Manager Report Format		Imogen Powell		Relinquished by		Claire Williamson			
Address		Level 27, 680 George Street Sydney, NSW 2000 Australia		Project Name		Charter Hall, Glendenning GME		PDF + Esdat				Email for Results		20/08/2021			
Contact Name		Imogen Powell		Analyses (Note: Where metals are requested, please specify "Total" or "Filtered".) SUITE code must be used to attach SUITE picking.		TRH, BTEXN 8 metals, phenols, PCBs, VOCs, SVOCs, formaldehyde and chlorinated solvents.								Containers 1L Plastic 250mL Plastic 125mL Plastic 200mL Amber Glass 40mL VOA vial 500mL PFAS Bottle Jar (Glass or HDPE) Other (Asbestos AS4904, WA Guidell)		Turnaround Time (TAT) Overnight (9am)* 1 Day* 2 Day* 3 Day* 5 Day (27/08/21) Other ()	
Phone No		9272 1478															
Special Directions																	
Purchase Order		30071332															
Quote ID No																	
No	Client Sample ID	Sampled Date	Matrix												Sample Comments / Dangerous Goods Hazard Warning		
1	QA01	20/08/21	W	x	x												
2	QA01A	20/08/21	W	x	x										Please forward to ALS, PO 30071333		
3	RB01	20/08/21	W	x	x												
4	TB01	20/08/21	W	x	x												
5	TS01	20/08/21	W	x	x												
6	MW01	20/08/21	W	x	x												
7	MW02	20/08/21	W	x	x												
8	MW03	20/08/21	W	x	x												
9	MW04	20/08/21	W	x	x												
Total Counts				9	9												
Method of Shipment		Courier (#)		Hand Delivered		Postal		Name				Date		Time			
Eurofins mgt Laboratory Use Only		Received By Jeremy		SYD BNE MEL PER ADL NTL DRW		Signature CPans		Date 23/8/21		Time 11:31 AM		Temperature 9.2		Report No 819039			
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Report No					

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Australia
Melbourne

6 Monterey Road
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NATA # 1261 Site # 1254

Sydney

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane

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

Perth

46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

Newcastle

4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand
Auckland

35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch

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

Sample Receipt Advice

Company name: WSP Australia P/L NSW
Contact name: Imogen Powell
Project name: CHARTER HALL GLENDENNING GME
Project ID: PS125811
Turnaround time: 5 Day
Date/Time received: Aug 23, 2021 11:31 AM
Eurofins reference: 819034

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 9.2 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✓ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Sample QA01 forwarded to ALS (500ml unpreserved inorganics, 1L semi-volatile amber, 250ml semi-volatile amber, filtered metals container, and 2 vials) . Unable to run specified analysis on sample TB01 and TS01, logged for volatile analysis only.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Imogen Powell - imogen.powell@wsp.com.

Note: A copy of these results will also be delivered to the general WSP Australia P/L NSW email address.

Australia

Melbourne
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NATA # 1261 Site # 1254

Sydney
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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
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NATA # 1261 Site # 20794

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Order No.: 30071332
Report #: 819034
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 23, 2021 11:31 AM
Due: Aug 30, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING GME
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Formaldehyde	Chlorinated Hydrocarbons	Polychlorinated Biphenyls	Phenols (Speciated)	Volatile Organics	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	QA01	Aug 20, 2021		Water	S21-Au41718	X	X	X	X		X		X	
2	RB01	Aug 20, 2021		Water	S21-Au41719	X	X	X	X		X		X	
3	TB01	Aug 20, 2021		Water	S21-Au41720					X		X		
4	TS01	Aug 20, 2021		Water	S21-Au41721									X
5	MW01	Aug 20, 2021		Water	S21-Au41722	X	X	X	X		X		X	
6	MW02	Aug 20, 2021		Water	S21-Au41723	X	X	X	X		X		X	
7	MW03	Aug 20, 2021		Water	S21-Au41724	X	X	X	X		X		X	
8	MW04	Aug 20, 2021		Water	S21-Au41725	X	X	X	X		X		X	
Test Counts						6	6	6	6	1	6	1	6	1

WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001



NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: Imogen Powell

Report 819034-W
Project name CHARTER HALL GLENDENNING GME
Project ID PS125811
Received Date Aug 23, 2021

Client Sample ID			QA01	RB01	TB01	TS01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Au41718	S21-Au41719	S21-Au41720	S21-Au41721
Date Sampled			Aug 20, 2021	Aug 20, 2021	Aug 20, 2021	Aug 20, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	-	-
Naphthalene ^{NO2}	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1) ^{NO4}	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2) ^{NO1}	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	-	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	117	107	111	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			QA01	RB01	TB01	TS01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Au41718	S21-Au41719	S21-Au41720	S21-Au41721
Date Sampled			Aug 20, 2021	Aug 20, 2021	Aug 20, 2021	Aug 20, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1,3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1,3,5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1,4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1,2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1,3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Bromofluorobenzene (surr.)	1	%	117	107	111	-
Toluene-d8 (surr.)	1	%	115	107	111	-

Client Sample ID			QA01 Water S21-Au41718 Aug 20, 2021	RB01 Water S21-Au41719 Aug 20, 2021	TB01 Water S21-Au41720 Aug 20, 2021	TS01 Water S21-Au41721 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Chlorinated Hydrocarbons						
1,2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,3,5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Benzal chloride	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Benzotrifluoride	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	-	-
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Tetrachloro-m-xylene (surr.)	1	%	118	82	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1221	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1232	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1242	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1248	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1254	0.005	mg/L	< 0.005	< 0.005	-	-
Aroclor-1260	0.005	mg/L	< 0.005	< 0.005	-	-
Total PCB*	0.005	mg/L	< 0.005	< 0.005	-	-
Dibutylchloride (surr.)	1	%	88	120	-	-
Tetrachloro-m-xylene (surr.)	1	%	118	82	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	-	-
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-

Client Sample ID			QA01 Water S21-Au41718 Aug 20, 2021	RB01 Water S21-Au41719 Aug 20, 2021	TB01 Water S21-Au41720 Aug 20, 2021	TS01 Water S21-Au41721 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Dinoseb	0.1	mg/L	< 0.1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	46	21	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	-	-
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	-	-
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	-	-
1,2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,3,5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
1,4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	-	-
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2-Fluorobiphenyl (surr.)	1	%	69	78	-	-
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	-	-
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2-Picoline	0.005	mg/L	< 0.005	< 0.005	-	-
2,3,4,6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2,4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	-	-
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,4,6-Tribromophenol (surr.)	1	%	54	59	-	-
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2,6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2,6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	-	-
3,3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	-	-
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	-	-
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
4,4'-DDD	0.005	mg/L	< 0.005	< 0.005	-	-
4,4'-DDE	0.005	mg/L	< 0.005	< 0.005	-	-
4,4'-DDT	0.005	mg/L	< 0.005	< 0.005	-	-
7,12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	-	-
a-HCH	0.005	mg/L	< 0.005	< 0.005	-	-

Client Sample ID			QA01 Water S21-Au41718 Aug 20, 2021	RB01 Water S21-Au41719 Aug 20, 2021	TB01 Water S21-Au41720 Aug 20, 2021	TS01 Water S21-Au41721 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatile Organics						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	-
Acetophenone	0.005	mg/L	< 0.005	< 0.005	-	-
Aldrin	0.005	mg/L	< 0.005	< 0.005	-	-
Aniline	0.005	mg/L	< 0.005	< 0.005	-	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
b-HCH	0.005	mg/L	< 0.005	< 0.005	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	-	-
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	-	-
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	-	-
Bis(2-ethylhexyl)phthalate	0.005	mg/L	0.006	< 0.005	-	-
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	-	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	-	-
d-HCH	0.005	mg/L	< 0.005	< 0.005	-	-
Di-n-butyl phthalate	0.005	mg/L	0.008	0.007	-	-
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	-	-
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Dibenz(a,j)acridine	0.005	mg/L	< 0.005	< 0.005	-	-
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	-	-
Dieldrin	0.005	mg/L	< 0.005	< 0.005	-	-
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	-	-
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	-	-
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	-	-
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	-	-
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	-	-
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	-	-
Endrin	0.005	mg/L	< 0.005	< 0.005	-	-
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	-	-
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	-	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	-
g-HCH (Lindane)	0.005	mg/L	< 0.005	< 0.005	-	-
Heptachlor	0.005	mg/L	< 0.005	< 0.005	-	-
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	-	-
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	-	-
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	-	-
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	-	-
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	-	-
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	-	-

Client Sample ID			QA01 Water S21-Au41718 Aug 20, 2021	RB01 Water S21-Au41719 Aug 20, 2021	TB01 Water S21-Au41720 Aug 20, 2021	TS01 Water S21-Au41721 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatile Organics						
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	-
Nitrobenzene	0.05	mg/L	< 0.05	< 0.05	-	-
Nitrobenzene-d5 (surr.)	1	%	69	95	-	-
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	46	21	-	-
Pronamide	0.005	mg/L	< 0.005	< 0.005	-	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Trifluralin	0.005	mg/L	< 0.005	< 0.005	-	-
Formaldehyde	0.2	mg/L	< 0.2	< 0.2	-	-
TRH C6-C10	1	%	-	-	-	77
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.006	< 0.001	-	-
Cadmium (filtered)	0.0002	mg/L	0.0008	< 0.0002	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Copper (filtered)	0.001	mg/L	0.004	0.004	-	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	0.027	< 0.001	-	-
Zinc (filtered)	0.005	mg/L	0.054	0.007	-	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	-	95
TRH C6-C9	1	%	-	-	-	80
BTEX						
Benzene	1	%	-	-	-	110
Ethylbenzene	1	%	-	-	-	100
m&p-Xylenes	1	%	-	-	-	110
o-Xylene	1	%	-	-	-	100
Toluene	1	%	-	-	-	110
Xylenes - Total	1	%	-	-	-	100
4-Bromofluorobenzene (surr.)	1	%	-	-	-	101

Client Sample ID			MW01 Water S21-Au41722 Aug 20, 2021	MW02 Water S21-Au41723 Aug 20, 2021	MW03 Water S21-Au41724 Aug 20, 2021	MW04 Water S21-Au41725 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene ^{N02}	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			MW01 Water S21-Au41722 Aug 20, 2021	MW02 Water S21-Au41723 Aug 20, 2021	MW03 Water S21-Au41724 Aug 20, 2021	MW04 Water S21-Au41725 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	116	107	115	116
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	0.002	0.002
2-Propanone (Acetone)	0.001	mg/L	0.002	0.005	0.033	0.015
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW01 Water S21-Au41722 Aug 20, 2021	MW02 Water S21-Au41723 Aug 20, 2021	MW03 Water S21-Au41724 Aug 20, 2021	MW04 Water S21-Au41725 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Volatile Organics						
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	116	107	115	116
Toluene-d8 (surr.)	1	%	115	109	110	113
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benzal chloride	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzotrifluoride	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Tetrachloro-m-xylene (surr.)	1	%	65	65	66	65
Polychlorinated Biphenyls						
Aroclor-1016	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1221	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1232	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			MW01 Water S21-Au41722 Aug 20, 2021	MW02 Water S21-Au41723 Aug 20, 2021	MW03 Water S21-Au41724 Aug 20, 2021	MW04 Water S21-Au41725 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1248	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Total PCB*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibutylchloredate (surr.)	1	%	90	87	85	90
Tetrachloro-m-xylene (surr.)	1	%	65	65	66	65
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	62	69	98	36
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Semivolatile Organics						
2-Methyl-4,6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2,3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2,3,4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2,3,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2,4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,2,4,5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,3,5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1,4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Fluorobiphenyl (surr.)	1	%	83	67	50	94
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			MW01 Water S21-Au41722 Aug 20, 2021	MW02 Water S21-Au41723 Aug 20, 2021	MW03 Water S21-Au41724 Aug 20, 2021	MW04 Water S21-Au41725 Aug 20, 2021
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatiles Organics						
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2,3,4,6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2,4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2,4,5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,4,6-Tribromophenol (surr.)	1	%	67	22	32	31
2,4,6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2,6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2,6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3,3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
4,4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4,4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4,4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
7,12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
a-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	0.008	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	0.010	< 0.005	< 0.005	0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a,j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			MW01 Water	MW02 Water	MW03 Water	MW04 Water
Sample Matrix			S21-Au41722	S21-Au41723	S21-Au41724	S21-Au41725
Eurofins Sample No.			Aug 20, 2021	Aug 20, 2021	Aug 20, 2021	Aug 20, 2021
Date Sampled						
Test/Reference	LOR	Unit				
Semivolatiles Organics						
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-HCH (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene-d5 (surr.)	1	%	74	76	81	72
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	62	69	98	36
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Formaldehyde	0.2	mg/L	< 0.2	< 0.2	< 0.2	< 0.2
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.007	0.012	0.008	0.004
Cadmium (filtered)	0.0002	mg/L	0.0007	0.0008	< 0.0002	0.0025
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.005	0.003	0.004	0.004
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.025	0.034	0.038	0.19
Zinc (filtered)	0.005	mg/L	0.064	0.037	0.052	0.21

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Aug 25, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B6 (filtered metals)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8 filtered	Melbourne	Aug 25, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Semivolatile Organics	Melbourne	Aug 25, 2021	7 Days
- Method: USEPA SW 846 8270			
Chlorinated Hydrocarbons	Melbourne	Aug 25, 2021	7 Days
- Method: USEPA 8121 Chlorinated Hydrocarbons			
Polychlorinated Biphenyls	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Formaldehyde	Melbourne	Aug 25, 2021	7 Days
- Method: Melbourne Water HMSO			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Aug 25, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			

Australia

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

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

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

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46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

Auckland
35 O'Rourke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Order No.: 30071332
Report #: 819034
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Aug 23, 2021 11:31 AM
Due: Aug 30, 2021
Priority: 5 Day
Contact Name: Imogen Powell

Project Name: CHARTER HALL GLENDENNING GME
Project ID: PS125811

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Formaldehyde	Chlorinated Hydrocarbons	Polychlorinated Biphenyls	Phenols (Speciated)	Volatile Organics	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	QA01	Aug 20, 2021		Water	S21-Au41718	X	X	X	X		X		X	
2	RB01	Aug 20, 2021		Water	S21-Au41719	X	X	X	X		X		X	
3	TB01	Aug 20, 2021		Water	S21-Au41720					X		X		
4	TS01	Aug 20, 2021		Water	S21-Au41721									X
5	MW01	Aug 20, 2021		Water	S21-Au41722	X	X	X	X		X		X	
6	MW02	Aug 20, 2021		Water	S21-Au41723	X	X	X	X		X		X	
7	MW03	Aug 20, 2021		Water	S21-Au41724	X	X	X	X		X		X	
8	MW04	Aug 20, 2021		Water	S21-Au41725	X	X	X	X		X		X	
Test Counts						6	6	6	6	1	6	1	6	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	ug/L: micrograms per litre
ppm: Parts per million	ppb: Parts per billion	%: Percentage
org/100mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Formaldehyde	mg/L	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	113			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	109			70-130	Pass	
TRH >C10-C16	%	78			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	99			70-130	Pass	
Ethylbenzene	%	113			70-130	Pass	
m&p-Xylenes	%	124			70-130	Pass	
Xylenes - Total*	%	120			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	91			70-130	Pass	
1.1.1-Trichloroethane	%	75			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1,2-Dichlorobenzene			%	116			70-130	Pass	
1,2-Dichloroethane			%	84			70-130	Pass	
LCS - % Recovery									
Formaldehyde			%	107			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M21-Au42989	NCP	%	100			75-125	Pass	
Cadmium (filtered)	M21-Au42989	NCP	%	97			75-125	Pass	
Chromium (filtered)	M21-Au42989	NCP	%	98			75-125	Pass	
Copper (filtered)	M21-Au42989	NCP	%	94			75-125	Pass	
Lead (filtered)	M21-Au42989	NCP	%	96			75-125	Pass	
Mercury (filtered)	M21-Au42989	NCP	%	98			75-125	Pass	
Nickel (filtered)	M21-Au42989	NCP	%	90			75-125	Pass	
Zinc (filtered)	M21-Au42989	NCP	%	95			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M21-Au42989	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	M21-Au42989	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M21-Au42989	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M21-Au42989	NCP	mg/L	0.001	0.001	<1	30%	Pass	
Lead (filtered)	M21-Au42989	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	M21-Au42989	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M21-Au42989	NCP	mg/L	0.038	0.038	<1	30%	Pass	
Zinc (filtered)	M21-Au42989	NCP	mg/L	0.012	0.012	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

John Nguyen	Analytical Services Manager
Vivian Wang	Senior Analyst-Volatile (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Emily Rosenberg	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2130773

Client : WSP Australia Pty Ltd Contact : MS IMOGEN POWELL Address : LEVEL 27 680 GEORGE STREET SYDNEY 2000 E-mail : Imogen.Powell@wsp.com Telephone : ---- Facsimile : ---- Project : PS125811 Charter Hall, Glendenning GME Order number : 30071333 C-O-C number : ---- Site : ---- Sampler : ----	Laboratory : Environmental Division Sydney Contact : Christopher Redford Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 E-mail : Christopher.Redford@ALSGlobal.com Telephone : +61 2 8784 8555 Facsimile : +61-2-8784 8500 Page : 1 of 2 Quote number : ES2020PARBRINSW0007 (EN/008/20) QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 24-Aug-2021 16:00	Issue Date : 26-Aug-2021
Client Requested Due Date : 31-Aug-2021	Scheduled Reporting Date : 31-Aug-2021

Delivery Details

Mode of Delivery : Carrier	Security Seal : Not Available
No. of coolers/boxes : 1	Temperature : 8.3°C - Ice present
Receipt Detail :	No. of samples received / analysed : 1 / 1

General Comments

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



Sample Container(s)/Preservation Non-Compliances

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

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

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

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

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP010 Formaldehyde	WATER - EP066-PCB-WA Polychlorinated Biphenyls (PCB)	WATER - EP074DEFG VOC - Fumigants, Hal Aliphatics, Hal Aromatics, SIM - Phenols only	WATER - W-02 8 Metals	WATER - W-04 TRH/TEXN	WATER - W-23 SVOC/VOC
ES2130773-001	20-Aug-2021 00:00	QA01A	✓	✓	✓	✓	✓	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **WATER**

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

Method	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)				Date	Evaluation	Date	Evaluation
EP010: Formaldehyde							
QA01A	Clear Plastic Bottle - Natural	----	22-Aug-2021	24-Aug-2021	✖	----	----

Requested Deliverables

CLAIRE WILLIAMSON

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

ESDAT REPORTS

- EDI Format - ESDAT (ESDAT)	Email	wsp@esdat.com.au

IMOGEN POWELL

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

INVOICES

- A4 - AU Tax Invoice (INV)	Email	au.accountspayable@wsp.com

CERTIFICATE OF ANALYSIS

Work Order : **ES2130773**
Client : **WSP Australia Pty Ltd**
Contact : **MS IMOGEN POWELL**
Address : **LEVEL 27 680 GEORGE STREET**
 SYDNEY 2000
Telephone : **----**
Project : **PS125811 Charter Hall, Glendenning GME**
Order number : **30071333**
C-O-C number : **----**
Sampler : **----**
Site : **----**
Quote number : **EN/008/20**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 12
Laboratory : Environmental Division Sydney
Contact : Christopher Redford
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 24-Aug-2021 16:00
Date Analysis Commenced : 25-Aug-2021
Issue Date : 31-Aug-2021 19:51



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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP075: Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
Sampling date / time				20-Aug-2021 00:00	----	----	----	----	
Compound	CAS Number	LOR	Unit	ES2130773-001	-----	-----	-----	-----	
				Result	----	----	----	----	
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	0.006	----	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	0.0007	----	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----	
Copper	7440-50-8	0.001	mg/L	0.006	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	0.027	----	----	----	----	
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----	
Zinc	7440-66-6	0.005	mg/L	0.054	----	----	----	----	
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----	
EP010: Formaldehyde									
Formaldehyde	50-00-0	0.1	mg/L	<0.1	----	----	----	----	
EP066: Polychlorinated Biphenyls (PCB)									
^ Total Polychlorinated biphenyls		----	1	µg/L	<1	----	----	----	
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	1	µg/L	<1	----	----	----	----	
Toluene	108-88-3	2	µg/L	<2	----	----	----	----	
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----	
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----	
Styrene	100-42-5	5	µg/L	<5	----	----	----	----	
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----	
Isopropylbenzene	98-82-8	5	µg/L	<5	----	----	----	----	
n-Propylbenzene	103-65-1	5	µg/L	<5	----	----	----	----	
1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	----	----	----	----	
sec-Butylbenzene	135-98-8	5	µg/L	<5	----	----	----	----	
1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	----	----	----	----	
tert-Butylbenzene	98-06-6	5	µg/L	<5	----	----	----	----	
p-Isopropyltoluene	99-87-6	5	µg/L	<5	----	----	----	----	
n-Butylbenzene	104-51-8	5	µg/L	<5	----	----	----	----	
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	50	µg/L	<50	----	----	----	----	
2-Butanone (MEK)	78-93-3	50	µg/L	<50	----	----	----	----	
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	----	----	----	----	
2-Hexanone (MBK)	591-78-6	50	µg/L	<50	----	----	----	----	
EP074C: Sulfonated Compounds									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
Sampling date / time					20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130773-001	-----	-----	-----	-----
					Result	----	----	----	----
EP074C: Sulfonated Compounds - Continued									
Carbon disulfide	75-15-0	5	µg/L		<5	----	----	----	----
EP074D: Fumigants									
2,2-Dichloropropane	594-20-7	5	µg/L		<5	----	----	----	----
1,2-Dichloropropane	78-87-5	5	µg/L		<5	----	----	----	----
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L		<5	----	----	----	----
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L		<5	----	----	----	----
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	----	----	----	----
Chloromethane	74-87-3	50	µg/L		<50	----	----	----	----
Vinyl chloride	75-01-4	50	µg/L		<50	----	----	----	----
Bromomethane	74-83-9	50	µg/L		<50	----	----	----	----
Chloroethane	75-00-3	50	µg/L		<50	----	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	----	----	----	----
1,1-Dichloroethene	75-35-4	5	µg/L		<5	----	----	----	----
Iodomethane	74-88-4	5	µg/L		<5	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	5	µg/L		<5	----	----	----	----
1,1-Dichloroethane	75-34-3	5	µg/L		<5	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	5	µg/L		<5	----	----	----	----
1,1,1-Trichloroethane	71-55-6	5	µg/L		<5	----	----	----	----
1,1-Dichloropropylene	563-58-6	5	µg/L		<5	----	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	----	----	----	----
1,2-Dichloroethane	107-06-2	5	µg/L		<5	----	----	----	----
Trichloroethene	79-01-6	5	µg/L		<5	----	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	----	----	----	----
1,1,2-Trichloroethane	79-00-5	5	µg/L		<5	----	----	----	----
1,3-Dichloropropane	142-28-9	5	µg/L		<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	----	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L		<5	----	----	----	----
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L		<5	----	----	----	----
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	----	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L		<5	----	----	----	----
1,2,3-Trichloropropane	96-18-4	5	µg/L		<5	----	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
Sampling date / time					20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130773-001	-----	-----	-----	-----
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	----	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L		<5	----	----	----	----
Bromobenzene	108-86-1	5	µg/L		<5	----	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L		<5	----	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L		<5	----	----	----	----
1,3-Dichlorobenzene	541-73-1	5	µg/L		<5	----	----	----	----
1,4-Dichlorobenzene	106-46-7	5	µg/L		<5	----	----	----	----
1,2-Dichlorobenzene	95-50-1	5	µg/L		<5	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	5	µg/L		<5	----	----	----	----
1,2,3-Trichlorobenzene	87-61-6	5	µg/L		<5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	5	µg/L		<5	----	----	----	----
Bromodichloromethane	75-27-4	5	µg/L		<5	----	----	----	----
Dibromochloromethane	124-48-1	5	µg/L		<5	----	----	----	----
Bromoform	75-25-2	5	µg/L		<5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	----	----	----	----
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	----	----	----	----
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	----	----	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	----	----	----	----
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	----	----	----	----
2,4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	----	----	----	----
2,4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	----	----	----	----
2,6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	----	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	----	----	----	----
EP075A: Phenolic Compounds									
Phenol	108-95-2	2	µg/L		<2	----	----	----	----
2-Chlorophenol	95-57-8	2	µg/L		<2	----	----	----	----
2-Methylphenol	95-48-7	2	µg/L		<2	----	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				QA01A	----	----	----	----
Sampling date / time				20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2130773-001	-----	-----	-----	-----
Result				----	----	----	----	----
EP075A: Phenolic Compounds - Continued								
3- & 4-Methylphenol	1319-77-3	4	µg/L	<4	----	----	----	----
2-Nitrophenol	88-75-5	2	µg/L	<2	----	----	----	----
2,4-Dimethylphenol	105-67-9	2	µg/L	<2	----	----	----	----
2,4-Dichlorophenol	120-83-2	2	µg/L	<2	----	----	----	----
2,6-Dichlorophenol	87-65-0	2	µg/L	<2	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	----	----	----	----
Pentachlorophenol	87-86-5	4	µg/L	<4	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	2	µg/L	<2	----	----	----	----
2-Methylnaphthalene	91-57-6	2	µg/L	<2	----	----	----	----
2-Chloronaphthalene	91-58-7	2	µg/L	<2	----	----	----	----
Acenaphthylene	208-96-8	2	µg/L	<2	----	----	----	----
Acenaphthene	83-32-9	2	µg/L	<2	----	----	----	----
Fluorene	86-73-7	2	µg/L	<2	----	----	----	----
Phenanthrene	85-01-8	2	µg/L	<2	----	----	----	----
Anthracene	120-12-7	2	µg/L	<2	----	----	----	----
Fluoranthene	206-44-0	2	µg/L	<2	----	----	----	----
Pyrene	129-00-0	2	µg/L	<2	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	----	----	----	----
Benz(a)anthracene	56-55-3	2	µg/L	<2	----	----	----	----
Chrysene	218-01-9	2	µg/L	<2	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	----	----	----	----
7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	----	----	----	----
Benzo(a)pyrene	50-32-8	2	µg/L	<2	----	----	----	----
3-Methylcholanthrene	56-49-5	2	µg/L	<2	----	----	----	----
Indeno(1,2,3-cd)pyrene	193-39-5	2	µg/L	<2	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	----	----	----	----
^ Sum of PAHs	----	2	µg/L	<2	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	----	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	2	µg/L	<2	----	----	----	----



Analytical Results

Sub-Matrix: **WATER**
 (Matrix: **WATER**)

Sample ID

				QA01A	----	----	----	----
Sampling date / time				20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2130773-001	-----	-----	-----	-----
Result				----	----	----	----	----

EP075C: Phthalate Esters - Continued

Diethyl phthalate	84-66-2	2	µg/L	<2	----	----	----	----
Di-n-butyl phthalate	84-74-2	2	µg/L	<2	----	----	----	----
Butyl benzyl phthalate	85-68-7	2	µg/L	<2	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	----	----	----	----
Di-n-octylphthalate	117-84-0	2	µg/L	<2	----	----	----	----

EP075D: Nitrosamines

N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	----	----	----	----
N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	----	----	----	----
N-Nitrosomorpholine	59-89-2	2	µg/L	<2	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	----	----	----	----
N-Nitrosopiperidine	100-75-4	2	µg/L	<2	----	----	----	----
N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	----	----	----	----
Methapyrilene	91-80-5	2	µg/L	<2	----	----	----	----

EP075E: Nitroaromatics and Ketones

2-Picoline	109-06-8	2	µg/L	<2	----	----	----	----
Acetophenone	98-86-2	2	µg/L	<2	----	----	----	----
Nitrobenzene	98-95-3	2	µg/L	<2	----	----	----	----
Isophorone	78-59-1	2	µg/L	<2	----	----	----	----
2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	----	----	----	----
2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	----	----	----	----
1-Naphthylamine	134-32-7	2	µg/L	<2	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	----	----	----	----
5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	----	----	----	----
Azobenzene	103-33-3	2	µg/L	<2	----	----	----	----
1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	----	----	----	----
Phenacetin	62-44-2	2	µg/L	<2	----	----	----	----
4-Aminobiphenyl	92-67-1	2	µg/L	<2	----	----	----	----
Pentachloronitrobenzene	82-68-8	2	µg/L	<2	----	----	----	----
Pronamide	23950-58-5	2	µg/L	<2	----	----	----	----
Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	----	----	----	----
Chlorobenzilate	510-15-6	2	µg/L	<2	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
Sampling date / time					20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130773-001	-----	-----	-----	-----
					Result	----	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	2	µg/L		<2	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L		<2	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L		<2	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	2	µg/L		<2	----	----	----	----
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	2	µg/L		<2	----	----	----	----
1,4-Dichlorobenzene	106-46-7	2	µg/L		<2	----	----	----	----
1,2-Dichlorobenzene	95-50-1	2	µg/L		<2	----	----	----	----
Hexachloroethane	67-72-1	2	µg/L		<2	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	2	µg/L		<2	----	----	----	----
Hexachloropropylene	1888-71-7	2	µg/L		<2	----	----	----	----
Hexachlorobutadiene	87-68-3	2	µg/L		<2	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	10	µg/L		<10	----	----	----	----
Pentachlorobenzene	608-93-5	2	µg/L		<2	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	4	µg/L		<4	----	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	2	µg/L		<2	----	----	----	----
4-Chloroaniline	106-47-8	2	µg/L		<2	----	----	----	----
2-Nitroaniline	88-74-4	4	µg/L		<4	----	----	----	----
3-Nitroaniline	99-09-2	4	µg/L		<4	----	----	----	----
Dibenzofuran	132-64-9	2	µg/L		<2	----	----	----	----
4-Nitroaniline	100-01-6	2	µg/L		<2	----	----	----	----
Carbazole	86-74-8	2	µg/L		<2	----	----	----	----
3,3'-Dichlorobenzidine	91-94-1	2	µg/L		<2	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	2	µg/L		<2	----	----	----	----
beta-BHC	319-85-7	2	µg/L		<2	----	----	----	----
gamma-BHC	58-89-9	2	µg/L		<2	----	----	----	----
delta-BHC	319-86-8	2	µg/L		<2	----	----	----	----
Heptachlor	76-44-8	2	µg/L		<2	----	----	----	----
Aldrin	309-00-2	2	µg/L		<2	----	----	----	----
Heptachlor epoxide	1024-57-3	2	µg/L		<2	----	----	----	----
alpha-Endosulfan	959-98-8	2	µg/L		<2	----	----	----	----
4,4'-DDE	72-55-9	2	µg/L		<2	----	----	----	----



Analytical Results

Sub-Matrix: **WATER**
 (Matrix: **WATER**)

Sample ID

				QA01A	----	----	----	----
Sampling date / time				20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2130773-001	-----	-----	-----	-----
Result				----	----	----	----	----

EP075I: Organochlorine Pesticides - Continued

Dieldrin	60-57-1	2	µg/L	<2	----	----	----	----
Endrin	72-20-8	2	µg/L	<2	----	----	----	----
beta-Endosulfan	33213-65-9	2	µg/L	<2	----	----	----	----
4,4`-DDD	72-54-8	2	µg/L	<2	----	----	----	----
Endosulfan sulfate	1031-07-8	2	µg/L	<2	----	----	----	----
4,4`-DDT	50-29-3	4	µg/L	<4	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	4	µg/L	<4	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	4	µg/L	<4	----	----	----	----

EP075J: Organophosphorus Pesticides

Dichlorvos	62-73-7	2	µg/L	<2	----	----	----	----
Dimethoate	60-51-5	2	µg/L	<2	----	----	----	----
Diazinon	333-41-5	2	µg/L	<2	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	----	----	----	----
Malathion	121-75-5	2	µg/L	<2	----	----	----	----
Fenthion	55-38-9	2	µg/L	<2	----	----	----	----
Chlorpyrifos	2921-88-2	2	µg/L	<2	----	----	----	----
Pirimphos-ethyl	23505-41-1	2	µg/L	<2	----	----	----	----
Chlorfenvinphos	470-90-6	2	µg/L	<2	----	----	----	----
Prothiofos	34643-46-4	2	µg/L	<2	----	----	----	----
Ethion	563-12-2	2	µg/L	<2	----	----	----	----

EP080/071: Total Petroleum Hydrocarbons

C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	----

EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
Sampling date / time					20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130773-001	-----	-----	-----	-----
Result						----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)		----	100	µg/L	<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L	<1	----	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----	----
^ Total Xylenes		----	2	µg/L	<2	----	----	----	----
^ Sum of BTEX		----	1	µg/L	<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	1	%	72.2	----	----	----	----	----
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	5	%	113	----	----	----	----	----
Toluene-D8	2037-26-5	5	%	113	----	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%	109	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%	18.6	----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%	35.4	----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	1.0	%	45.6	----	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%	54.1	----	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%	63.2	----	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%	80.4	----	----	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	2	%	31.7	----	----	----	----	----
Phenol-d6	13127-88-3	2	%	25.8	----	----	----	----	----
2-Chlorophenol-D4	93951-73-6	2	%	42.5	----	----	----	----	----
2,4,6-Tribromophenol	118-79-6	2	%	43.4	----	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	2	%	44.1	----	----	----	----	----
1,2-Dichlorobenzene-D4	2199-69-1	2	%	30.4	----	----	----	----	----
2-Fluorobiphenyl	321-60-8	2	%	40.5	----	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA01A	----	----	----	----
				Sampling date / time	20-Aug-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2130773-001	-----	-----	-----	-----
				Result	----	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates - Continued									
Anthracene-d10	1719-06-8	2	%		66.8	----	----	----	----
4-Terphenyl-d14	1718-51-0	2	%		68.4	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		98.4	----	----	----	----
Toluene-D8	2037-26-5	2	%		101	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		109	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	45	134
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	10	117
Phenol-d6	13127-88-3	10	69
2-Chlorophenol-D4	93951-73-6	21	130
2,4,6-Tribromophenol	118-79-6	10	151
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	29	142
1,2-Dichlorobenzene-D4	2199-69-1	24	121
2-Fluorobiphenyl	321-60-8	27	135
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	21	123
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

QUALITY CONTROL REPORT

Work Order	: ES2130773	Page	: 1 of 18
Client	: WSP Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS IMOGEN POWELL	Contact	: Christopher Redford
Address	: LEVEL 27 680 GEORGE STREET SYDNEY 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: PS125811 Charter Hall, Glendenning GME	Date Samples Received	: 24-Aug-2021
Order number	: 30071333	Date Analysis Commenced	: 25-Aug-2021
C-O-C number	: ----	Issue Date	: 31-Aug-2021
Sampler	: ----		
Site	: ----		
Quote number	: EN/008/20		
No. of samples received	: 1		
No. of samples analysed	: 1		



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

This Quality Control Report contains the following information:

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3869292)									
ES2130773-001	QA01A	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0007	0.0008	13.1	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.006	0.007	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.027	0.026	4.3	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.054	0.054	0.0	0% - 50%
ES2130870-005	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0018	0.0018	0.0	0% - 50%
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.110	0.112	1.5	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.010	0.011	11.1	0% - 50%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.134	0.139	3.8	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 3869293)									
ES2130783-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0001	0.0	No Limit
ES2130868-007	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP010: Formaldehyde (QC Lot: 3865574)									
ES2130773-001	QA01A	EP010: Formaldehyde	50-00-0	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3865777)									
ES2130773-001	QA01A	EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	<1	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3868945) - continued									
ES2130773-001	QA01A	EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit		
EP074B: Oxygenated Compounds (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: 2.2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3868945) - continued									
ES2130773-001	QA01A	EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 3868945)									
ES2130773-001	QA01A	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3865778)									
ES2130773-001	QA01A	EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	<1.0	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 3865778) - continued									
ES2130773-001	QA01A	EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	<2.0	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	<2.0	0.0	No Limit
EP075A: Phenolic Compounds (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Phenol	108-95-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	<4	<4	0.0	No Limit
		EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,4-Dimethylphenol	105-67-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,4-Dichlorophenol	120-83-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,6-Dichlorophenol	87-65-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	<4	0.0	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fluorene	86-73-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Anthracene	120-12-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pyrene	129-00-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chrysene	218-01-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Indeno(1,2,3.cd)pyrene	193-39-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	<2	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3865776) - continued									
ES2130773-001	QA01A	EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	<10	0.0	No Limit
		EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	<2	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Methapyrilene	91-80-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	<4	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	<4	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: 2-Picoline	109-06-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Acetophenone	98-86-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Isophorone	78-59-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Azobenzene	103-33-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Phenacetin	62-44-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pronamide	23950-58-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorobenzilate	510-15-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	<4	0.0	No Limit
		EP075: 2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	<4	0.0	No Limit
EP075F: Haloethers (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	<2	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075F: Haloethers (QC Lot: 3865776) - continued									
ES2130773-001	QA01A	EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	<2	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	<10	0.0	No Limit
		EP075: 1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Aniline	62-53-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Carbazole	86-74-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 3,3`-Dichlorobenzidine	91-94-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	<4	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	<4	0.0	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: alpha-BHC	319-84-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: beta-BHC	319-85-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: gamma-BHC	58-89-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: delta-BHC	319-86-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Heptachlor	76-44-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Aldrin	309-00-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	<2	0.0	No Limit
		EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4,4`-DDE	72-55-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dieldrin	60-57-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Endrin	72-20-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4,4`-DDD	72-54-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	<2	0.0	No Limit
		EP075: 4,4`-DDT	50-29-3	4	µg/L	<4	<4	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075I: Organochlorine Pesticides (QC Lot: 3865776) - continued									
ES2130773-001	QA01A	EP075: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	4	µg/L	<4	<4	0.0	No Limit
		EP075: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	4	µg/L	<4	<4	0.0	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 3865776)									
ES2130773-001	QA01A	EP075: Dichlorvos	62-73-7	2	µg/L	<2	<2	0.0	No Limit
		EP075: Dimethoate	60-51-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Diazinon	333-41-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	<2	0.0	No Limit
		EP075: Malathion	121-75-5	2	µg/L	<2	<2	0.0	No Limit
		EP075: Fenthion	55-38-9	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	<2	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	<2	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	<2	0.0	No Limit
		EP075: Prothiofos	34643-46-4	2	µg/L	<2	<2	0.0	No Limit
		EP075: Ethion	563-12-2	2	µg/L	<2	<2	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3865779)									
ES2130773-001	QA01A	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3868946)									
ES2130868-008	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2130773-001	QA01A	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3865779)									
ES2130773-001	QA01A	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3868946)									
ES2130868-008	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2130773-001	QA01A	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3868946)									
ES2130868-008	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2130773-001	QA01A	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit

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 Work Order : ES2130773
 Client : WSP Australia Pty Ltd
 Project : PS125811 Charter Hall, Glendenning GME



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 3868946) - continued									
ES2130773-001	QA01A	EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit



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

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

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3869292)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	86.4	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	89.4	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	93.6	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	88.3	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	88.4	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	91.1	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	88.3	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3869293)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	88.8	83.0	105
EP010: Formaldehyde (QCLot: 3865574)								
EP010: Formaldehyde	50-00-0	0.1	mg/L	<0.1	2 mg/L	87.0	83.0	111
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3865777)								
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10 µg/L	90.9	68.9	113
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3868945)								
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	98.3	77.0	119
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	96.5	69.0	129
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	96.4	76.0	118
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	20 µg/L	98.3	77.0	119
	106-42-3							
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	96.1	73.0	119
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	96.1	79.0	117
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	95.6	76.0	118
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	97.4	69.0	119
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	97.0	74.0	116
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	97.3	73.0	119
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	97.1	74.0	116
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	97.3	72.0	116
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	98.3	71.0	119
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	98.8	65.0	123
EP074B: Oxygenated Compounds (QCLot: 3868945)								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	100 µg/L	93.8	61.4	134
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	100 µg/L	83.9	73.6	130
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	100 µg/L	90.6	66.0	132
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	100 µg/L	91.2	65.0	137



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP074C: Sulfonated Compounds (QCLot: 3868945)								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	10 µg/L	103	72.8	127
EP074D: Fumigants (QCLot: 3868945)								
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	100	68.0	122
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	98.9	76.0	118
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	93.8	62.0	120
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	96.5	60.0	114
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	93.6	69.0	117
EP074E: Halogenated Aliphatic Compounds (QCLot: 3868945)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	104	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	99.1	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	102	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	99.4	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	100	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	100	69.0	131
EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	97.6	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	97.5	70.2	128
EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	98.2	74.0	118
EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	98.4	74.0	120
EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	96.2	77.0	119
EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	98.3	67.0	119
EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	98.2	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	99.4	62.0	120
EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	95.9	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	97.3	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	91.3	73.0	119
EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	92.6	72.0	126
EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	93.0	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	101	72.0	124
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	97.6	66.0	114
EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	97.6	60.0	120
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	85.3	70.6	128
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	95.4	70.0	124
EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	90.8	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	95.2	71.8	126
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	86.0	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	99.4	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3868945)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	99.9	79.0	117



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 3868945) - continued								
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	95.7	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	97.4	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	99.0	73.0	119
EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	96.6	75.0	117
EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	98.7	74.0	118
EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	95.5	75.0	117
EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	96.9	61.0	125
EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	95.2	67.0	123
EP074G: Trihalomethanes (QCLot: 3868945)								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	97.0	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	95.0	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	98.6	65.0	115
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	91.2	73.5	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3865778)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	42.2	24.5	61.9
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	69.0	52.0	90.0
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	67.6	51.0	91.0
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	65.9	44.0	88.0
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	73.2	48.0	100
EP075(SIM): 2,4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	81.5	49.0	99.0
EP075(SIM): 2,4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	71.7	53.0	105
EP075(SIM): 2,6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	72.1	57.0	105
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	70.1	53.0	99.0
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	70.5	50.0	106
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	73.2	51.0	105
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	36.7	10.0	95.0
EP075A: Phenolic Compounds (QCLot: 3865776)								
EP075: Phenol	108-95-2	2	µg/L	<2	10 µg/L	38.9	25.5	64.1
EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	10 µg/L	69.3	52.0	88.0
EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	10 µg/L	64.7	50.0	94.0
EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2	10 µg/L	61.9	45.0	96.2
EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	10 µg/L	81.9	48.0	98.0
EP075: 2,4-Dimethylphenol	105-67-9	2	µg/L	<2	10 µg/L	65.2	50.0	94.0
EP075: 2,4-Dichlorophenol	120-83-2	2	µg/L	<2	10 µg/L	85.6	61.9	109
EP075: 2,6-Dichlorophenol	87-65-0	2	µg/L	<2	10 µg/L	82.0	61.5	108
EP075: 4-Chloro-3-methylphenol	59-50-7	2	µg/L	<2	10 µg/L	89.6	61.4	107
EP075: 2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	10 µg/L	88.2	57.6	112
EP075: 2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	10 µg/L	92.3	58.0	110



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP075A: Phenolic Compounds (QCLot: 3865776) - continued								
EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	20 µg/L	74.8	12.8	95.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3865776)								
EP075: Naphthalene	91-20-3	2	µg/L	<2	10 µg/L	72.3	51.0	95.0
EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	10 µg/L	79.6	59.0	108
EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	10 µg/L	70.8	60.6	106
EP075: Acenaphthylene	208-96-8	2	µg/L	<2	10 µg/L	91.4	64.0	108
EP075: Acenaphthene	83-32-9	2	µg/L	<2	10 µg/L	81.8	65.0	108
EP075: Fluorene	86-73-7	2	µg/L	<2	10 µg/L	85.8	65.2	107
EP075: Phenanthrene	85-01-8	2	µg/L	<2	10 µg/L	90.9	66.7	108
EP075: Anthracene	120-12-7	2	µg/L	<2	10 µg/L	89.4	65.8	108
EP075: Fluoranthene	206-44-0	2	µg/L	<2	10 µg/L	89.6	64.9	109
EP075: Pyrene	129-00-0	2	µg/L	<2	10 µg/L	89.8	60.1	111
EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	10 µg/L	97.4	59.7	110
EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	10 µg/L	90.8	62.2	112
EP075: Chrysene	218-01-9	2	µg/L	<2	10 µg/L	86.6	59.3	114
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	20 µg/L	94.8	60.1	111
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	10 µg/L	94.4	50.0	108
EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	10 µg/L	92.6	59.2	112
EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	10 µg/L	99.6	60.1	110
EP075: Indeno(1,2,3-cd)pyrene	193-39-5	2	µg/L	<2	10 µg/L	93.8	59.6	110
EP075: Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	10 µg/L	94.4	57.2	109
EP075: Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	10 µg/L	89.0	60.6	110
EP075: Benzo(a)pyrene TEQ (zero)	----	2	µg/L	<2	----	----	----	----
EP075C: Phthalate Esters (QCLot: 3865776)								
EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	10 µg/L	93.7	64.3	112
EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	10 µg/L	87.1	67.3	111
EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	10 µg/L	94.6	68.4	122
EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	10 µg/L	91.1	61.2	114
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	µg/L	----	10 µg/L	122	60.0	132
EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	10 µg/L	103	62.1	115
EP075D: Nitrosamines (QCLot: 3865776)								
EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	10 µg/L	64.5	46.0	110
EP075: N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	10 µg/L	74.8	60.6	113
EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	10 µg/L	73.8	45.0	91.0
EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	10 µg/L	67.6	42.0	100
EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	10 µg/L	81.6	63.5	108
EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	10 µg/L	84.0	61.7	107



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP075D: Nitrosamines (QCLot: 3865776) - continued								
EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	10 µg/L	# 117	62.5	108
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	20 µg/L	83.9	64.6	112
EP075: Methapyrilene	91-80-5	2	µg/L	<2	10 µg/L	49.9	23.3	125
EP075E: Nitroaromatics and Ketones (QCLot: 3865776)								
EP075: 2-Picoline	109-06-8	2	µg/L	<2	10 µg/L	63.3	41.0	109
EP075: Acetophenone	98-86-2	2	µg/L	<2	10 µg/L	76.6	68.3	112
EP075: Nitrobenzene	98-95-3	2	µg/L	<2	10 µg/L	70.7	68.3	112
EP075: Isophorone	78-59-1	2	µg/L	<2	10 µg/L	85.0	67.6	111
EP075: 2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	10 µg/L	95.4	64.4	113
EP075: 2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	10 µg/L	85.9	59.5	109
EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	10 µg/L	79.4	46.8	102
EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	10 µg/L	69.3	40.0	96.0
EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	10 µg/L	83.4	58.3	106
EP075: Azobenzene	103-33-3	2	µg/L	<2	10 µg/L	83.0	66.0	112
EP075: 1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	10 µg/L	83.0	46.0	108
EP075: Phenacetin	62-44-2	2	µg/L	<2	10 µg/L	75.4	57.8	101
EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	10 µg/L	77.2	60.1	112
EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	10 µg/L	83.0	59.0	109
EP075: Pronamide	23950-58-5	2	µg/L	<2	10 µg/L	91.5	62.7	109
EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	10 µg/L	89.2	59.4	108
EP075: Chlorobenzilate	510-15-6	2	µg/L	<2	10 µg/L	92.0	57.7	110
EP075F: Haloethers (QCLot: 3865776)								
EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	10 µg/L	74.6	69.1	112
EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	10 µg/L	82.0	66.2	111
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	10 µg/L	85.3	64.7	109
EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	10 µg/L	87.8	61.6	108
EP075G: Chlorinated Hydrocarbons (QCLot: 3865776)								
EP075: 1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	10 µg/L	66.3	41.0	97.0
EP075: 1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	10 µg/L	68.6	40.0	96.0
EP075: 1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	10 µg/L	69.0	41.0	95.0
EP075: Hexachloroethane	67-72-1	2	µg/L	<2	10 µg/L	65.2	46.0	88.0
EP075: 1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	10 µg/L	73.9	46.0	96.0
EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	10 µg/L	67.5	34.0	96.0
EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	10 µg/L	70.1	37.4	100
EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	10 µg/L	65.3	23.5	107
EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	10 µg/L	82.9	64.5	107
EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	10 µg/L	85.4	65.7	110



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
CAS Number	LOR	Unit	Result					
EP075H: Anilines and Benzidines (QCLot: 3865776)								
EP075: Aniline	62-53-3	2	µg/L	<2	10 µg/L	74.2	50.0	104
EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	10 µg/L	81.8	42.0	106
EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	10 µg/L	89.2	60.9	110
EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	10 µg/L	83.3	51.5	96.9
EP075: Dibenzofuran	132-64-9	2	µg/L	<2	10 µg/L	85.2	65.3	108
EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	10 µg/L	81.4	48.9	99.5
EP075: Carbazole	86-74-8	2	µg/L	<2	10 µg/L	90.9	64.3	107
EP075: 3,3'-Dichlorobenzidine	91-94-1	2	µg/L	<2	10 µg/L	88.5	60.3	119
EP075I: Organochlorine Pesticides (QCLot: 3865776)								
EP075: alpha-BHC	319-84-6	2	µg/L	<2	10 µg/L	86.4	64.3	110
EP075: beta-BHC	319-85-7	2	µg/L	<2	10 µg/L	79.7	53.0	107
EP075: gamma-BHC	58-89-9	2	µg/L	<2	10 µg/L	83.9	51.0	111
EP075: delta-BHC	319-86-8	2	µg/L	<2	10 µg/L	90.9	57.0	111
EP075: Heptachlor	76-44-8	2	µg/L	<2	10 µg/L	88.0	57.9	108
EP075: Aldrin	309-00-2	2	µg/L	<2	10 µg/L	89.4	56.0	112
EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	10 µg/L	92.3	50.0	118
EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	10 µg/L	92.4	59.0	111
EP075: 4,4'-DDE	72-55-9	2	µg/L	<2	10 µg/L	89.1	53.0	115
EP075: Dieldrin	60-57-1	2	µg/L	<2	10 µg/L	88.8	59.0	115
EP075: Endrin	72-20-8	2	µg/L	<2	10 µg/L	89.9	58.0	114
EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	10 µg/L	91.1	54.0	116
EP075: 4,4'-DDD	72-54-8	2	µg/L	<2	10 µg/L	91.0	55.0	115
EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	10 µg/L	101	52.8	114
EP075: 4,4'-DDT	50-29-3	4	µg/L	<4	10 µg/L	90.4	56.0	114
EP075: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	4	µg/L	<4	----	----	----	----
EP075: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	4	µg/L	<4	----	----	----	----
EP075J: Organophosphorus Pesticides (QCLot: 3865776)								
EP075: Dichlorvos	62-73-7	2	µg/L	<2	10 µg/L	99.4	51.0	113
EP075: Dimethoate	60-51-5	2	µg/L	<2	10 µg/L	86.0	43.0	109
EP075: Diazinon	333-41-5	2	µg/L	<2	10 µg/L	86.4	49.0	113
EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	10 µg/L	92.7	54.1	116
EP075: Malathion	121-75-5	2	µg/L	<2	10 µg/L	113	54.0	124
EP075: Fenthion	55-38-9	2	µg/L	<2	10 µg/L	95.2	57.0	115
EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	10 µg/L	91.0	53.0	109
EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	10 µg/L	93.0	55.0	111
EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	10 µg/L	99.1	50.0	116
EP075: Prothiofos	34643-46-4	2	µg/L	<2	10 µg/L	89.5	54.0	118

Matrix Spike (MS) Report

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3869292)							
ES2130783-001	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	91.5	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	95.2	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	100	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	98.5	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	102	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	95.2	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	96.2	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3869293)							



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035F: Dissolved Mercury by FIMS (QCLot: 3869293) - continued							
ES2130773-001	QA01A	EG035F: Mercury	7439-97-6	0.01 mg/L	90.8	70.0	130
EP010: Formaldehyde (QCLot: 3865574)							
ES2130773-001	QA01A	EP010: Formaldehyde	50-00-0	2.5 mg/L	93.2	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3865777)							
ES2130773-001	QA01A	EP066: Total Polychlorinated biphenyls	----	10 µg/L	109	68.2	116
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3868945)							
ES2130773-001	QA01A	EP074: Benzene	71-43-2	25 µg/L	90.6	70.0	130
		EP074: Toluene	108-88-3	25 µg/L	89.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3868945)							
ES2130773-001	QA01A	EP074: 1,1-Dichloroethene	75-35-4	25 µg/L	91.2	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	84.8	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3868945)							
ES2130773-001	QA01A	EP074: Chlorobenzene	108-90-7	25 µg/L	90.4	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3865778)							
ES2130773-001	QA01A	EP075(SIM): Phenol	108-95-2	20 µg/L	33.8	20.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	20 µg/L	75.7	60.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	20 µg/L	73.4	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	20 µg/L	75.3	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	20 µg/L	55.0	20.0	130
EP075A: Phenolic Compounds (QCLot: 3865776)							
ES2130773-001	QA01A	EP075: Phenol	108-95-2	20 µg/L	35.6	20.0	130
		EP075: 2-Chlorophenol	95-57-8	20 µg/L	66.9	60.0	130
		EP075: 2-Nitrophenol	88-75-5	20 µg/L	78.7	60.0	130
		EP075: 4-Chloro-3-methylphenol	59-50-7	20 µg/L	75.5	50.0	130
		EP075: Pentachlorophenol	87-86-5	20 µg/L	75.0	10.0	130
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3865776)							
ES2130773-001	QA01A	EP075: Acenaphthene	83-32-9	20 µg/L	71.1	60.0	130
		EP075: Pyrene	129-00-0	20 µg/L	78.9	60.0	130
EP075D: Nitrosamines (QCLot: 3865776)							
ES2130773-001	QA01A	EP075: N-Nitrosodi-n-propylamine	621-64-7	20 µg/L	74.6	60.0	130
EP075E: Nitroaromatics and Ketones (QCLot: 3865776)							
ES2130773-001	QA01A	EP075: 2,4-Dinitrotoluene	121-14-2	20 µg/L	69.2	60.0	130
EP075G: Chlorinated Hydrocarbons (QCLot: 3865776)							
ES2130773-001	QA01A	EP075: 1,4-Dichlorobenzene	106-46-7	20 µg/L	65.9	40.0	130
		EP075: 1,2,4-Trichlorobenzene	120-82-1	20 µg/L	73.5	40.0	130

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 Work Order : ES2130773
 Client : WSP Australia Pty Ltd
 Project : PS125811 Charter Hall, Glendenning GME



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3865779)							
ES2130773-001	QA01A	EP071: C10 - C14 Fraction	----	200 µg/L	103	70.0	130
		EP071: C15 - C28 Fraction	----	250 µg/L	128	71.0	130
		EP071: C29 - C36 Fraction	----	200 µg/L	108	67.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3868946)							
ES2130773-001	QA01A	EP080: C6 - C9 Fraction	----	325 µg/L	76.7	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3865779)							
ES2130773-001	QA01A	EP071: >C10 - C16 Fraction	----	250 µg/L	106	70.0	130
		EP071: >C16 - C34 Fraction	----	350 µg/L	115	75.0	130
		EP071: >C34 - C40 Fraction	----	150 µg/L	119	67.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3868946)							
ES2130773-001	QA01A	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	75.6	70.0	130
EP080: BTEXN (QCLot: 3868946)							
ES2130773-001	QA01A	EP080: Benzene	71-43-2	25 µg/L	75.5	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	79.6	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	80.9	70.0	130
		EP080: meta- & para-Xylene	108-38-3	25 µg/L	81.1	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	25 µg/L	81.9	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	76.2	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2130773	Page	: 1 of 7
Client	: WSP Australia Pty Ltd	Laboratory	: Environmental Division Sydney
Contact	: MS IMOGEN POWELL	Telephone	: +61 2 8784 8555
Project	: PS125811 Charter Hall, Glendenning GME	Date Samples Received	: 24-Aug-2021
Site	: ----	Issue Date	: 31-Aug-2021
Sampler	: ----	No. of samples received	: 1
Order number	: 30071333	No. of samples analysed	: 1

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075D: Nitrosamines	QC-3865776-002	----	N-Nitrosodibutylamine	924-16-3	117 %	62.5-108%	Recovery greater than upper control limit

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP010: Formaldehyde						
Clear Plastic Bottle - Natural QA01A	----	----	----	25-Aug-2021	22-Aug-2021	3

Analysis Holding Time Compliance

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

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

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

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

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) QA01A	20-Aug-2021	----	----	----	27-Aug-2021	16-Feb-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F) QA01A	20-Aug-2021	----	----	----	27-Aug-2021	17-Sep-2021	✓
EP010: Formaldehyde							
Clear Plastic Bottle - Natural (EP010) QA01A	20-Aug-2021	----	----	----	25-Aug-2021	22-Aug-2021	✗
EP066: Polychlorinated Biphenyls (PCB)							
Amber Glass Bottle - Unpreserved (EP066) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074B: Oxygenated Compounds							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP074C: Sulfonated Compounds							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP074D: Fumigants							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP074F: Halogenated Aromatic Compounds							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP074G: Trihalomethanes							
Clear glass VOC vial - HCl (EP074) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM)) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075C: Phthalate Esters							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075D: Nitrosamines							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075E: Nitroaromatics and Ketones							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075F: Haloethers							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓



Matrix: **WATER**

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

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075G: Chlorinated Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075H: Anilines and Benzidines							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075I: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP075J: Organophosphorus Pesticides							
Amber Glass Bottle - Unpreserved (EP075) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
Clear glass VOC vial - HCl (EP080) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) QA01A	20-Aug-2021	26-Aug-2021	27-Aug-2021	✓	27-Aug-2021	05-Oct-2021	✓
Clear glass VOC vial - HCl (EP080) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓
EP080: BTEXN							
Clear glass VOC vial - HCl (EP080) QA01A	20-Aug-2021	27-Aug-2021	03-Sep-2021	✓	27-Aug-2021	03-Sep-2021	✓



Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	50.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	3	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Formaldehyde	EP010	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	33.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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 Work Order : ES2130773
 Client : WSP Australia Pty Ltd
 Project : PS125811 Charter Hall, Glendenning GME



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
TRH - Semivolatile Fraction	EP071	1	3	33.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	3	33.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Formaldehyde	EP010	WATER	In house: Referenced to ASTM D 6303-98. s
Polychlorinated Biphenyls (PCB)	EP066	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
Semivolatile Organic Compounds	EP075	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

APPENDIX D

BORE LOGS



BOREHOLE ENVIRONMENTAL LOG

BH01

SHEET 1 OF 1

Client: **Charter Hall**
Project: **Environmental Due Diligence Assessment - Phase I and II**
Borehole Location: **600 Woodstock Avenue, Rooty Hill NSW**
Project Number: **PS125811**

Date Commenced: **16/8/21**
Date Completed: **16/8/21**
Recorded By: **CW**
Log Checked By: **IP**

Drill Model/Mounting: **Solid flight auger**
Borehole Diameter: **150 mm**

Hole Angle: **-90°** Surface RL:
Bearing: **---** Co-ords: **E 150.8504501 N -33.7613717**

[illegible]

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



BOREHOLE NO.

BOREHOLE ENVIRONMENTAL LOG**BH02**

SHEET 1 OF 1

Client:	Charter Hall	Date Commenced:	16/8/21
Project:	Environmental Due Diligence Assessment - Phase I and II	Date Completed:	16/8/21
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW	Recorded By:	CW
Project Number:	PS125811	Log Checked By:	IP

Drill Model/Mounting: Hand auger/Solid flight auger Hole Angle: -90° Surface RL: Borehole Diameter: 150 mm Bearing: --- Co-ords: E 150.8500914 N -33.7625446

Borehole Information						Field Material Description							
1	2	3	4	5	6	7	8	9	10	11	12	13	
METHOD	SUPPORT	WATER	RL(m)	DEPTH(m)	PID (ppm)	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	MOISTURE	RELATIVE DENSITY / CONSISTENCY	Field pH	STRUCTURE AND ADDITIONAL OBSERVATIONS (Defects - depth, type, orientation, spacing, planarity, roughness, thickness, coating)
VS	FB	VL	MD	ST	VD	H							
HA				0.10	1.4	B&J			Concrete	W			No HC odour, actone odour observed; No ACM observed
				0.30	1.1	B&J			Fill: Clayey SAND, brown, fine angular gravels.	M			No HC odour, actone odour observed; No ACM observed
					0.5	B&J			CLAY, grey to brown, trace sand.	M			No HC odour, actone odour observed; No ACM observed
				1.00-1	0.0	B&J			CLAY, grey, mottled red, interbedded ironstone.	D			No HC odour, actone odour observed; No ACM observed
SFA													No HC odour; No ACM observed
				-2	0.1	B&J			BH Terminated - Target depth reached END OF BOREHOLE AT 2.00 m	D			No HC odour; No ACM observed
				-3									
				-4									
				-5									
				-6									
				-7									
				-8									
				-9									
				-10									

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



BOREHOLE ENVIRONMENTAL LOG

BOREHOLE NO.

BH03 / MW01

SHEET 1 OF 1

Client: **Charter Hall**
Project: **Environmental Due Diligence Assessment - Phase I and II**
Borehole Location: **600 Woodstock Avenue, Rooty Hill NSW**
Project Number: **PS125811**

Date Commenced: **16/8/21**
Date Completed: **16/8/21**
Recorded By: **CW**
Log Checked By: **IP**

Drill Model/Mounting: **Hand auger/Solid flight auger** Driller:

Surface RL:

Borehole Diameter: **150 mm**

Driller Lic No:

Co-ords:

E 150.8502765 N -33.7619072

Borehole Information							Field Material Description						
	2	3	4	5	6	7	8	9	10		11	12	13
METHOD	SUPPORT	WATER	WELL CONSTRUCTION	RL(m)	DEPTH(m)	Field PID (ppm)	SAMPLE	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	Field pH	MOISTURE	RELATIVE DENSITY /CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			Grout + Gatic Cover Sand	0.26 0.50	0.2 0.1	B&J B&J		Concrete FILL: Silty SAND, dark brown, angular gravels. CLAY, grey.			W D		No HC odour; No ACM observed No HC odour; No ACM observed No HC odour; No ACM observed
				1.00-1	0.1	B&J		CLAY, red/grey, slightly stiff.			D		No HC odour; No ACM observed
SFA			Bentonite	-2	0.0	B&J					D		No HC odour; No ACM observed
				-3	0.0	B&J					D		No HC odour; No ACM observed
			Sand	4.00-4	0.1	B&J		CLAY/SHALE, grey, gravelly shale pieces.			D		No HC odour; No ACM observed
			Screen	-5	0.0	B&J					D		No HC odour; No ACM observed
				-6	0.1	B&J					D		No HC odour; No ACM observed
				7.00-7	0.0	B&J		SHALE with some clay, grey, recovered as powder.			D		No HC odour; No ACM observed
				-8	0.0	B&J					D		No HC odour; No ACM observed
			End Cap	9.00-9	0.1	B&J		Target depth reached END OF BOREHOLE AT 9.00 m			D		No HC odour; No ACM observed
				-10									

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



BOREHOLE NO.

BOREHOLE ENVIRONMENTAL LOG**BH04**

SHEET 1 OF 1

Client:	Charter Hall	Date Commenced:	16/8/21
Project:	Environmental Due Diligence Assessment - Phase I and II	Date Completed:	16/8/21
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW	Recorded By:	CW
Project Number:	PS125811	Log Checked By:	IP

Drill Model/Mounting: Hand auger/Solid flight auger Hole Angle: -90° Surface RL: Borehole Diameter: 150 mm Bearing: --- Co-ords: E 150.8505514 N -33.7616432

Borehole Information						Field Material Description							
1	2	3	4	5	6	7	8	9	10	11	12	13	
METHOD	SUPPORT	WATER	RL(m)	DEPTH(m)	PID (ppm)	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	MOISTURE	RELATIVE DENSITY / CONSISTENCY	Field pH	STRUCTURE AND ADDITIONAL OBSERVATIONS (Defects - depth, type, orientation, spacing, planarity, roughness, thickness, coating)
HA		OWG		0.30 0.50 1.00	5.9 8.8 6.1	B&J B&J B&J			Concrete FILL: Silty SAND, dark brown to black, angular gravels. Natural: Silty CLAY, brown/dark grey with some black . Natural: CLAY with ironstone, pale grey/brown/red/orange.	W W M			No HC odour, hydrogen sulfide odour observed; No ACM observed No HC odour, hydrogen sulfide odour observed; No ACM observed. No HC odour, hydrogen sulfide odour observed; No ACM observed
SFA				-2	4.3	B&J			BH Terminated - Target depth reached END OF BOREHOLE AT 2.00 m	M			No HC odour, hydrogen sulfide odour observed; No ACM observed
				-3									
				-4									
				-5									
				-6									
				-7									
				-8									
				-9									
				-10									

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



BOREHOLE ENVIRONMENTAL LOG

BOREHOLE NO.

BH05 / MW02

SHEET 1 OF 1

Client: **Charter Hall**
Project: **Environmental Due Diligence Assessment - Phase I and II**
Borehole Location: **600 Woodstock Avenue, Rooty Hill NSW**
Project Number: **PS125811**

Date Commenced: **16/8/21**
Date Completed: **16/8/21**
Recorded By: **CW**
Log Checked By: **IP**

Drill Model/Mounting: **Hand auger/Solid flight auger** Driller:

Surface RL:

Borehole Diameter: **150 mm**

Driller Lic No:

Co-ords:

E 150.8503838 N -33.7622347

Borehole Information							Field Material Description						
	2	3	4	5	6	7	8	9	10		11	12	13
METHOD	SUPPORT	WATER	WELL CONSTRUCTION	RL(m)	DEPTH(m)	Field PID (ppm)	SAMPLE	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	Field pH	MOISTURE	RELATIVE DENSITY /CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			Grout + Gatic Cover	0.15	5.6	B&J		Concrete			W		No HC odour, hydrogen sulfide odour observed;
			Sand		3.1	B&J		Fill: Sandy CLAY, dark brown to dark grey, some angular gravel and some sand. Trace rootlets.			M		No ACM observed
													No HC odour; No ACM observed
				-1	4.6	B&J					M		No HC odour; No ACM observed
				1.30									
SFA								CLAY, grey to pale brown, some red and orange mottling, trace ironstone.			M		No HC odour; No ACM observed
				-2	0.2	B&J							
			Bentonite	-3	0.0	B&J					D		No HC odour; No ACM observed
				-4	0.1	B&J		CLAY/SHALE: Pale grey.			D		No HC odour; No ACM observed
			Sand	4.10									
			Screen	-5	0.0	B&J					D		No HC odour; No ACM observed
				-6	0.0	B&J					D		No HC odour; No ACM observed
													QA01/QA01A
				-7	0.0	B&J					D		No HC odour; No ACM observed
				-8	0.0	B&J					D		No HC odour; No ACM observed
			End Cap	9.00	9	0.0	B&J	Target depth reached END OF BOREHOLE AT 9.00 m			D		No HC odour; No ACM observed
				-10									

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



BOREHOLE NO.

BOREHOLE ENVIRONMENTAL LOG**BH06**

SHEET 1 OF 1

Client:	Charter Hall	Date Commenced:	18/8/21
Project:	Environmental Due Diligence Assessment - Phase I and II	Date Completed:	18/8/21
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW	Recorded By:	CW
Project Number:	PS125811	Log Checked By:	IP

Drill Model/Mounting: Hand auger/Solid flight auger Hole Angle: -90° Surface RL: Borehole Diameter: 150 mm Bearing: --- Co-ords: E 150.850091 N -33.762545

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m)	DEPTH(m)	PID (ppm)	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	MOISTURE	RELATIVE DENSITY / CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS (Defects - depth, type, orientation, spacing, planarity, roughness, thickness, coating)
HA				0.16	0.0	B&J			Concrete	W		No HC odour; No ACM observed
				0.50	0.0	B&J			Fill: Silty SAND, brown.	D		No HC odour; No ACM observed
				1.00-1	0.1	B&J			CLAY, brown/red.	D		No HC odour; No ACM observed
									CLAY, grey/red/minor black organic material, stiff.			No HC odour; No ACM observed QA04/QA04A
SFA				-2	0.1	B&J			BH Terminated - Target depth reached END OF BOREHOLE AT 2.00 m	D		No HC odour; No ACM observed
				-3								
				-4								
				-5								
				-6								
				-7								
				-8								
				-9								
				-10								

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



BOREHOLE NO.

BOREHOLE ENVIRONMENTAL LOG

BH07

SHEET 1 OF 1

Client:	Charter Hall	Date Commenced:	17/8/21
Project:	Environmental Due Diligence Assessment - Phase I and II	Date Completed:	17/8/21
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW	Recorded By:	CW
Project Number:	PS125811	Log Checked By:	IP

Drill Model/Mounting: Hand auger/Solid flight auger Hole Angle: -90° Surface RL: Borehole Diameter: 150 mm Bearing: --- Co-ords: E 150.8495596 N -33.7626358

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m)	DEPTH(m)	PID (ppm)	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	MOISTURE	RELATIVE DENSITY / CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS (Defects - depth, type, orientation, spacing, planarity, roughness, thickness, coating)
VS	FB	VL	MD	ST	VD	Field pH						
HA				0.10	0.0	B&J	XXXX		Fill : Gravelly CLAY, dark brown, medium to coarse angular gravel.	D		No HC odour; No ACM observed
				0.1	0.1	B&J			CLAY, brown/grey with red mottles, fine to angular coarse ironstone.	D		No HC odour; No ACM observed
				-1	0.1	B&J				D		No HC odour; No ACM observed
SFA				-2	0.0	B&J				D		No HC odour; No ACM observed
				-3	0.1	B&J				D		No HC odour; No ACM observed
				-4	0.1	B&J				D		No HC odour; No ACM observed
				4.40					CLAY/SHALE, dark brown to grey			
				-5	0.0	B&J			BH Terminated - Target depth reached END OF BOREHOLE AT 5.00 m	D		No HC odour; No ACM observed
				-6								
				-7								
				-8								
				-9								
				-10								

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

BOREHOLE ENVIRONMENTAL LOG

BH08

SHEET 1 OF 1

Client:	Charter Hall
Project:	Environmental Due Diligence Assessment - Phase I and II
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW
Project Number:	PS125811

Date Commenced: 17/8/21
Date Completed: 17/8/21
Recorded By: CW
Log Checked By: IP

Drill Model/Mounting: **Hand auger**Hole Angle: **-90°**

Surface RL:

Borehole Diameter: **150 mm**

Bearing: ---

Co-ords: **E 150.8500113 N -33.7619326**

[illegible]

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



BOREHOLE ENVIRONMENTAL LOG

BOREHOLE NO.

BH09 / MW03

SHEET 1 OF 1

Client: **Charter Hall**
Project: **Environmental Due Diligence Assessment - Phase I and II**
Borehole Location: **600 Woodstock Avenue, Rooty Hill NSW**
Project Number: **PS125811**

Date Commenced: **17/8/21**
Date Completed: **17/8/21**
Recorded By: **CW**
Log Checked By: **IP**

Drill Model/Mounting: **Hand auger/Solid flight auger** Driller:Surface RL: **0**Borehole Diameter: **150 mm**

Driller Lic No:

Co-ords: **E 150.8499797 N -33.7615022**

Borehole Information							Field Material Description						
	2	3	4	5	6	7	8	9	10		11	12	13
METHOD	SUPPORT	WATER	WELL CONSTRUCTION	RL(m)	DEPTH(m)	Field PID (ppm)	SAMPLE	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	Field pH	MOISTURE	RELATIVE DENSITY /CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			Grout + Gatic Cover	0.10	0.1	B&J		Concrete			D		No HC odour; No ACM observed
			Sand	0.30	0.0	B&J		Fill: Clayey SAND, grey to dark brown with red mottles, trace sand. Ironstone content increasing with depth.			D		No HC odour; No ACM observed
					0.1	B&J		Natural: CLAY, red/grey, slightly stiff.			D		No HC odour; No ACM observed
				-1	0.0	B&J					D		No HC odour; No ACM observed QA02/QA02A
SFA			Bentonite	-2	0.1	B&J					D		No HC odour; No ACM observed
				-3	0.1	B&J					D		No HC odour; No ACM observed
				-4	0.1	B&J					D		No HC odour; No ACM observed
				4.20				CLAY/SHALE; grey to dark brown.			D		No HC odour; No ACM observed
			Sand	-5	0.0	B&J					D		No HC odour; No ACM observed
			Screen	-6	0.1	B&J					D		No HC odour; No ACM observed
				-7	0.0	B&J					D		No HC odour; No ACM observed
				-8	0.0	B&J					D		No HC odour; No ACM observed
				-9	0.1	B&J					D		No HC odour; No ACM observed
			End Cap	10.00	0.0	B&J		Target depth reached END OF BOREHOLE AT 10.00 m			D		No HC odour; No ACM observed

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



BOREHOLE NO.

BOREHOLE ENVIRONMENTAL LOG**BH10**

SHEET 1 OF 1

Client:	Charter Hall	Date Commenced:	18/8/21
Project:	Environmental Due Diligence Assessment - Phase I and II	Date Completed:	18/8/21
Borehole Location:	600 Woodstock Avenue, Rooty Hill NSW	Recorded By:	CW
Project Number:	PS125811	Log Checked By:	IP

Drill Model/Mounting: **Hand auger/Solid flight auger** Hole Angle: **-90°** Surface RL:
 Borehole Diameter: **150 mm** Bearing: **---** Co-ords: **E 150.849781 N -33.761371**

Borehole Information						Field Material Description							
1	2	3	4	5	6	7	8	9	10	11	12	13	
METHOD	SUPPORT	WATER	RL(m)	DEPTH(m)	PID (ppm)	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	MOISTURE	RELATIVE DENSITY / CONSISTENCY	Field pH	STRUCTURE AND ADDITIONAL OBSERVATIONS (Defects - depth, type, orientation, spacing, planarity, roughness, thickness, coating)
VS	FB	VL	MD	VD	H								
HA		OSG	0.20	0.0	B&J		Concrete			W			No HC odour; No ACM observed
			0.50	0.1	B&J		Fill: Silty SAND, brown, coarse grained, inclusions of ceramic tiles.			D			No HC odour; No ACM observed
			-1	0.0	B&J		CLAY, red/grey, stiff, inclusions of ironstone and gravels.			D			No HC odour; No ACM observed
SFA			-2	0.1	B&J		BH Terminated - Target depth reached END OF BOREHOLE AT 2.00 m			D			No HC odour; No ACM observed
			-3										
			-4										
			-5										
			-6										
			-7										
			-8										
			-9										
			-10										

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



BOREHOLE ENVIRONMENTAL LOG

BOREHOLE NO.

BH13 / MW04

SHEET 1 OF 1

Client: **Charter Hall**
Project: **Environmental Due Diligence Assessment - Phase I and II**
Borehole Location: **600 Woodstock Avenue, Rooty Hill NSW**
Project Number: **PS125811**

Date Commenced: **17/8/21**
Date Completed: **17/8/21**
Recorded By: **CW**
Log Checked By: **IP**

Drill Model/Mounting: **Hand auger/Solid flight auger** Driller:Surface RL: **0**Borehole Diameter: **150 mm**

Driller Lic No:

Co-ords: **E 150.850246 N -33.7614119**

Borehole Information							Field Material Description						
	2	3	4	5	6	7	8	9	10		11	12	13
METHOD	SUPPORT	WATER	WELL CONSTRUCTION	RL(m)	DEPTH(m)	Field PID (ppm)	SAMPLE	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION (SOIL NAME; plasticity/grain size, colour, particle shape, secondary components, minor constituents, moisture, relative density/consistency) (ROCK NAME; grain size, colour, weathering, strength, minor constituents)	Field pH	MOISTURE	RELATIVE DENSITY /CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
HA			Grout + Gatic Cover	0.16	0.0	B&J		Concrete			W	FB	No HC odour; No ACM observed
			Sand	0.50	0.1	B&J		Fill: Silty SAND, brown.			D	VL	No HC odour; No ACM observed
				-1	0.0	B&J		CLAY, red/grey, stiff.			D	VS	No HC odour; No ACM observed
SFA			Bentonite	-2	0.1	B&J					D	VS	No HC odour; No ACM observed
				-3	0.2	B&J					D	VS	No HC odour; No ACM observed
				4.00-4	0.0	B&J		CLAY with some shale gravel, red/brown, slightly stiff, inclusions of ironstone.			D	VS	No HC odour; No ACM observed
			Sand	-5	0.1	B&J					D	VS	No HC odour; No ACM observed
			Screen	6.00-6	0.0	B&J		CLAY/SHALE, grey.			D	VS	No HC odour; No ACM observed
				-7	0.2	B&J					D	VS	No HC odour; No ACM observed
				-8	0.0	B&J					D	VS	No HC odour; No ACM observed
				-9	0.1	B&J					D	VS	No HC odour; No ACM observed
			End Cap	10.00-10	0.2	B&J		Target depth reached END OF BOREHOLE AT 10.00 m			D	VS	No HC odour; No ACM observed

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

APPENDIX E

PHOTO LOG





PHOTOGRAPHIC LOG – Site Inspection

Client Name

Charter Hall

Site Location

600 Woodstock Avenue, Rooty Hill, NSW 2766

Project No.

PS125811

Photo No.

1

Date

16 July 2021

Description

Two 20,000L ASTs containing chlorinated paraffin.



Photo No.

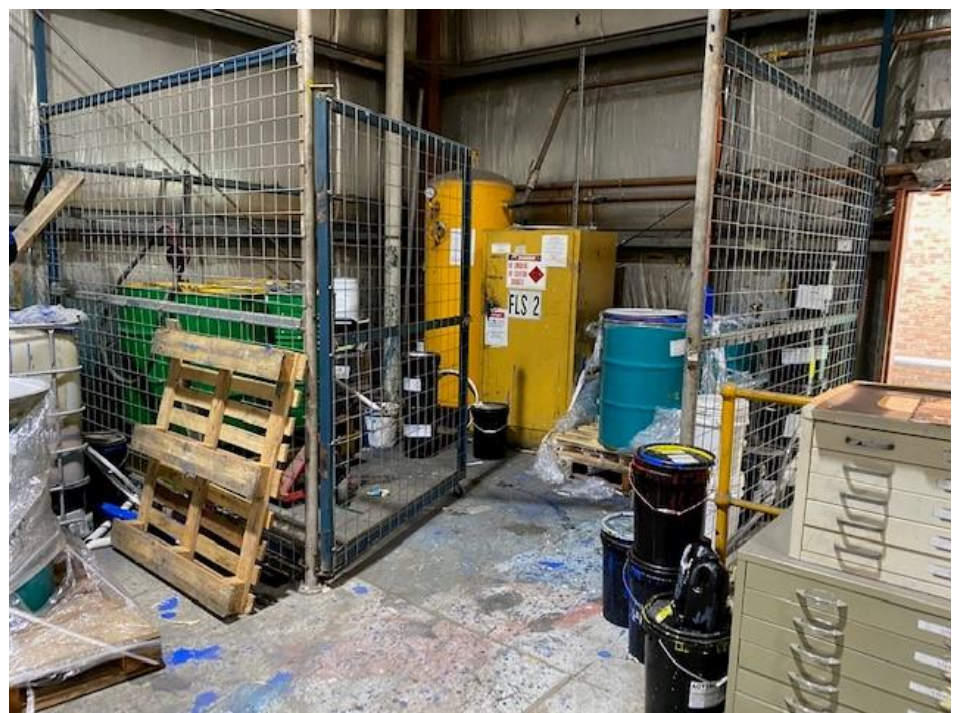
2

Date

16 July 2021

Description

Dangerous goods cage.





PHOTOGRAPHIC LOG – Site Inspection

Client Name

Charter Hall

Site Location

600 Woodstock Avenue, Rooty Hill, NSW 2766

Project No.

PS125811

Photo No.

3

Date

16 July 2021

Description

Elevated furnace above concrete pit and associated disused infrastructure.



Photo No.

4

Date

16 July 2021

Description

21,000 L formaldehyde AST.
Calcium carbonate on floor.



		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No. 5	Date 16 July 2021	
Description Two 15,000L formaldehyde tank storage area. Staining observed on wall.		

Photo No. 6	Date 16 July 2021	
Description Two 15,000 L formaldehyde tanks. Staining observed on tanks and floor.		

		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
7	16 July 2021	
Description Former WWTP footprint. Staining and cracking of concrete hardstand observed within vicinity of WWTP.		

Photo No.	Date	
8	16 July 2021	
Description Asbestos warning labels for ceiling material.		

		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
9	16 July 2021	
Description Southern warehouse (storage).		

Photo No.	Date	
10	16 July 2021	
Description Current manufacturing area (western portion of north warehouse).		

		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No. 11	Date 16 July 2021	
Description Concrete pit and associated machinery at base of disused furnace.		

Photo No. 12	Date 16 July 2021	
Description Carparking at southern boundary of the Site.		

		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No. 13	Date 16 July 2021	
Description Unsealed area in south-western corner of the Site.		

Photo No. 15	Date 16 August 2021	
Description Clay transitioning to shale material at BH01		

		PHOTOGRAPHIC LOG – Site Inspection	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
16	16 August 2021	
Description Shale material at BH01.		

Photo No.	Date	
17	18 August 2021	
Description Clay recovered from augers at BH12.		

APPENDIX F

HISTORICAL AERIAL PHOTOGRAPHS



		HISTORICAL AERIAL PHOTO LOG	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
1	1947	
Description 1947 historical aerial photograph		

Photo No.	Date	
2	1965	
Description 1965 historical aerial photograph		



HISTORICAL AERIAL PHOTO LOG

Client Name

Charter Hall

Site Location

600 Woodstock Avenue, Rooty Hill, NSW 2766

Project No.

PS125811

Photo No.

3

Date

1978

Description

1978 historical aerial photograph



Photo No.

4

Date

1986

Description

1986 historical aerial photograph



		HISTORICAL AERIAL PHOTO LOG	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
5	1998	
Description 1998 historical aerial photograph		

Photo No.	Date	
6	2004	
Description 2004 historical aerial photograph		

		HISTORICAL AERIAL PHOTO LOG	
Client Name Charter Hall	Site Location 600 Woodstock Avenue, Rooty Hill, NSW 2766		Project No. PS125811

Photo No.	Date	
7	2014	
Description 2014 historical aerial photograph		

Photo No.	Date	
8	2021	
Description 2021 historical aerial photograph		



Our ref: PS127955-SYD-CLM-LTR-600 WOODSTOCK AVE Rev2

By email
tgreenway@projectstrategy.com.au

17 December 2021

Tim Greenway C/o Charter Hall
Senior Project Manager
Project Strategy

Dear Tim

600 Woodstock Avenue, Rooty Hill SSDA - Site contamination assessment

1. Introduction

WSP Australia Pty Ltd (WSP) have been contracted by Charter Hall Holdings Pty Ltd (Charter Hall) to undertake contamination assessments to inform the environmental impact statement (EIS) for the proposal at 600 Woodstock Avenue, Rooty Hill (the site). The EIS has been prepared to accompany the application for approval of the proposal, and addresses the environmental assessment requirements of the Secretary of the Department of Planning, Industry and Environment (the SEARs), issued on 9 November 2021. A Phase 1 and Phase 2 investigation was previously conducted at the site by WSP on behalf of Charter Hall, WSP, September 2021 “*Environmental Due Diligence Assessment – Phase 1 and Phase II – 600 Woodstock Avenue, Rooty Hill NSW*”. This contamination assessment presents the findings from the previous investigation (WSP September 2021) and based on these findings this contamination assessment will provide conclusion on the suitability of the site for the proposed development.

2. Background

2.1 Project description

The proposal site is located at 600 Woodstock Avenue, Rooty Hill and is legally described as Lot 67 in Deposited Plan (DP)804292. The site is 1.97 hectares in area.

The proposal comprises the redevelopment of the site as summarised below:

- demolition of existing structures;
- construction and operation of a purpose built Materials Recycling Facility comprising a total of 7,572m² gross floor area, including:

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Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

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www.wsp.com

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

- maximum building height of RL 57.83m;
- warehouse space: 6,732m²;
- office space (across two levels) and amenities: 840m²;
- capacity to process up to 120,000 tonnes per annum;
- car parking provided on-site: 40 car spaces;
- hard and soft landscaping; and
- Building identification signage

2.2 Purpose and scope of this report

This letter addresses the Secretary's Environmental Assessment Requirements (SEARs) relevant to matters of contamination. The SEARs key issues relevant to contamination are:

- the requirement for a site contamination assessment in accordance with the Managing Land Contamination Planning Guidelines: SEPP 55 – Remediation of Land (DUAP, 1998), including characterisation of the nature and extent of any contamination on the site and surrounding area.
- Blacktown City Council require submission of a stage 2 site contamination report prepared by a qualified and accredited geoscientist which includes an assessment of existing contamination at the Site for the proposal and suitability of the Site for the intended use per State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55).
- The NSW EPA require an assessment in accordance with State Environmental Planning Policy 55 (Remediation of Land) of land contamination resulting from past land-use activities must determine, whether the land is suitable for the proposal or will require remediation. The EPA should be notified under section 60 of the Contaminated Land Management Act 1997 of any contamination identified that meets the triggers in the Guidelines on the duty to report contamination under the Contaminated Land Management Act 1997 found at www.epa.nsw.gov.au/your-environment/contaminated-land/statutory-guidelines.

3. Methodology

3.1 Approach to compliance with the SEARS

3.2 SEPP 55

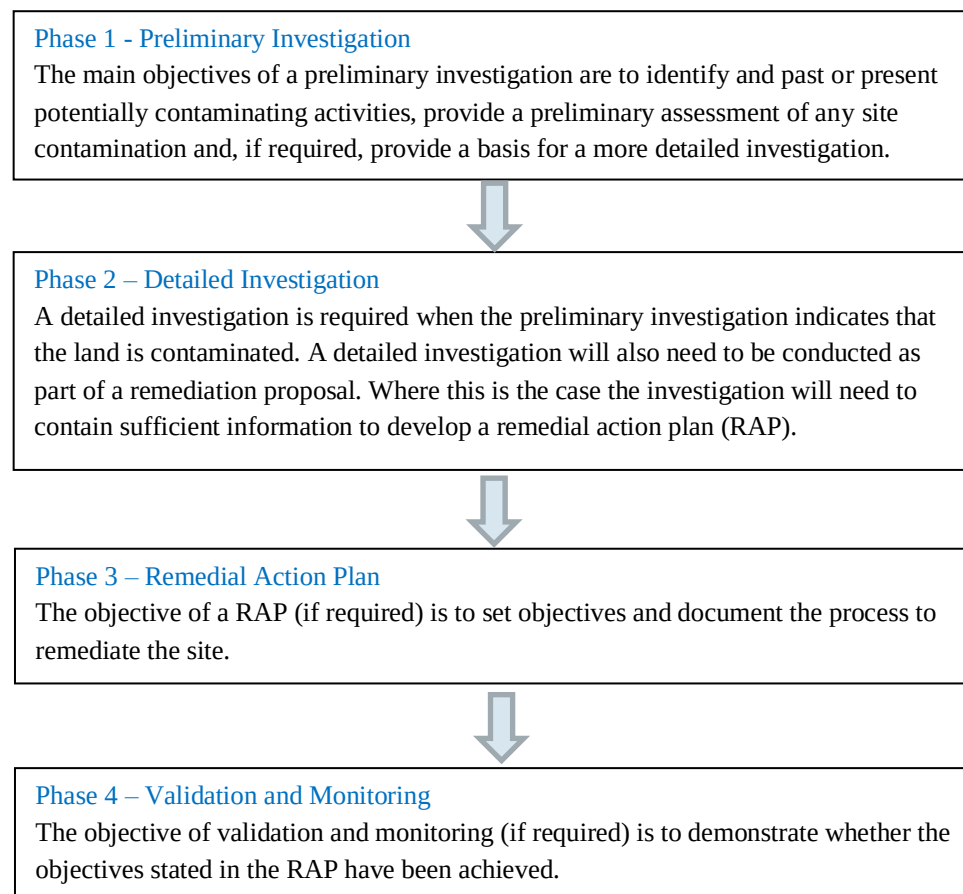
This section outlines the methodology for the assessment of contamination at the project site, to consider whether the site is suitable for the proposed development and to identify the need for remediation or any other mitigation measures.

The assessment follows the framework as per SEPP 55 and also for the assessment of site contamination outlined in the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013) (NEPM, 2013). As stated in SEPP 55 and the NEPM, the purpose of site assessment is to determine whether site contamination poses an actual or potential risk to human health or the environment, either on or off the site. The objective of the assessment is to determine whether the contamination is of sufficient magnitude to warrant remediation, based on the proposed land use.

The NEPM 2013 states that 'the preliminary investigation and initial assessment of site contamination should consider the possibility of all forms of potential contamination based on past use. The preliminary investigation should be sufficient to identify whether contamination exists on the site. A

detailed site investigation is required when the results of preliminary investigation are insufficient to enable site management strategies to be devised.

Depending on the proposed use and the results of initial site history investigations, the assessment of a site may involve both preliminary and detailed investigations. Many site investigations proceed in multiple stages due to the complexity of the site and the discovery of unexpected contamination. For the purpose of this technical working paper, the staged process presented in NEPM 2013 is summarised in the figure below.



To date an Environmental Due Diligence (EDD) (WSP, 2021) has been undertaken at the site to identify and assess potential environmental risks and issues at the site in the context of the proposed acquisition and development as summarised in Section 4. During the previous EDD works a desktop assessment was undertaken and a Phase 2 assessment was undertaken in accessible areas of the site.

As detailed in the NEPM (2013), the development of a conceptual site model (CSM) is a key component of contaminated site assessment and provides the framework for identifying how potential receptors may be exposed to contamination and the relevant data needs. A preliminary CSM has been developed and is presented in WSP (2021).

3.3 Assessment of site suitability

The site suitability will be assessed in the following section based on a review of the Phase 1 and Phase 2 environmental site assessments already undertaken at the site (WSP 2021). A review of the historical assessment to date is presented in Section 4.

4. Site Contamination Status

WSP was engaged by Charter Hall to conduct a Phase I and Phase 2 Environmental Due Diligence (EDD) Assessment of the site in September 2021 to identify and assess potential environmental risks and issues at the site in the context of the proposed acquisition and development (WSP 2021). The scope of works completed as part of this Phase I and 2 EDD included a desktop study to review the Site environmental setting, history and environmental regulatory status and an intrusive site assessment comprising the drilling of 13 boreholes, installation of 4 monitoring wells and laboratory analysis of soil and groundwater samples.

No contaminants of concern in soil were identified at concentrations above the adopted human health investigation criteria for commercial/industrial land use. Concentrations of nickel were above the adopted ecological investigation criteria for commercial/industrial land use, however, these concentrations were not considered to present a risk as no stressed vegetation was noted on site and the site will continue to be used as a commercial/industrial facility with minor areas of vegetation.

Minor concentrations of total recoverable hydrocarbons (TRH), total creosol, total phenol fenitrothion and methyl parathion were detected during laboratory analysis. These were attributed to the former or current site activities, however, these contaminants were not considered to present a risk to future site users as they will not come into contact with the subsurface soil due to the presence of hardstand across the site. Contact with soil during construction can be managed by implementation of a construction environment management plan (CEMP).

No contaminants of concern in groundwater were reported at concentrations above the adopted assessment criteria for freshwater with the exception of concentrations of cadmium, copper, nickel and zinc. Concentrations of copper, nickel and zinc above the adopted assessment criteria for the protection of freshwater are likely reflective of background concentrations. Concentration of cadmium above the adopted assessment criteria for the protection of freshwater are potentially related to the broader industrial precinct surrounding the site.

MEK, MIBK, acetone, bis(2-ethylhexyl) phthalate and di-n-butyl phthalate were detected in the groundwater at the site. The former or current operations of the site are potentially the source of these contaminants. There is the potential for higher concentrations of these contaminants to be located elsewhere on site in areas that were not accessible for investigation (i.e. inside the building footprints). A further contaminated land assessment, including soil vapour assessment, was recommended to be undertaken after site demolition and removal of the potential contamination sources and prior to site redevelopment.

5. Recommended mitigation and management measures

Data gaps, including areas of potential concern, exist in the current site assessment in the locations of the current buildings and site infrastructure. Further assessment is required to be undertaken in a staged approach in accordance with NEPM 2013 following demolition. The further intrusive investigation should target any areas of potential concern and former manufacturing areas.

The proposed development should be planned and designed to minimise disturbance and potential impacts on contaminated land where possible.

After demolition of the current site structures and prior to construction of the proposal, further contamination assessments would be undertaken to identify potential contamination allowing for management of contamination risks to ensure there is no unacceptable risk to human health or the environment. The known areas of contamination will need to be documented and a management framework developed for addressing soil, sediment, ground gas and groundwater contamination during construction.

The potential contamination and soil impacts should be minimised by:

- Managing contamination in accordance with relevant legislative and policy requirements.
- Implementing further staged investigation/assessment to ensure that the available information is sufficient to enable effective site management strategies to be devised.
- Designing, constructing and operating the project to minimise impacts from soil and groundwater issues.
- Implementation of an unexpected finds protocol (UFP) to address any additional contamination identified during site works.
- Implementing the contamination mitigation measures described in Table 5.1.

Additional contamination assessments are required to address current data gaps (refer Section 4). There are a number of current access constraints associated with existing land use, as such it is considered appropriate to undertake the additional investigations in a staged approach.

Table 5.1 Mitigation measures

IDENTIFIED MITIGATION MEASURE	TIMING	APPLICABLE LOCATION(S)
Further assessment of salinity would be completed at the proposal site where excavation is required. The assessment of salinity will include drilling of representative boreholes to test the depth profile of salts and consideration of how the works will affect surface and subsurface water flows. Where identified, salinity will be managed in accordance with the salinity management plan. Relevant aggressivity will be considered in the design of subsurface structures.	Post demolition/ pre-construction	Potential excavation locations
Remove asbestos in buildings and structures if identified. Removal to be undertaken by appropriately licenced persons, prior to construction, to enable construction will be carried out safely. Removal will be undertaken in accordance with How to Safely Remove Asbestos Code of Practice (Safe Work Australia, 2020) and relevant regulatory requirements	Pre-demolition	All potential buildings
Additional staged site investigations would be undertaken by a suitably qualified and experienced consultant, as defined in Schedule B9 of the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> (NEPC, 2013) to assess exposure risks to site workers and other receptors. The results of the site investigations will be assessed against the criteria contained within the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> to determine the need for any remediation.	Post demolition/ pre-construction	Potential excavation locations and areas of former infrastructure
The discovery of previously unidentified contaminated material will be managed in accordance with a contamination unexpected finds protocol.	Construction	All locations

IDENTIFIED MITIGATION MEASURE	TIMING	APPLICABLE LOCATION(S)
Certify material to be brought to site as Virgin Excavated Natural Material or otherwise a certified exempt material (e.g. ENM or recovered aggregate) or a landscape/construction product prepared to an established specification.	Construction	All locations
All chemicals, fuels or other hazardous substances will be stored in accordance with the supplier's instructions and relevant legislation, Australian Standards and applicable guidelines. The capacity of any bunded area shall be at least 130 per cent of the largest chemical volume contained within the bunded area. The location of the bunded enclosure/s shall be shown on site plans.	Construction	All locations
Emergency spill procedures will be implemented to avoid and manage accidental spillages of fuels, chemicals or fluids during operation and maintenance activities. Environmental spill kits will be provided at strategic, accessible locations, and staff will be trained in spill response procedures.	Construction	All locations
Analysis of all water to be discharged to sewer, stormwater or surface water and obtaining a tradewaste agreement in accordance with regulatory requirements permit or licence prior to discharge.	Construction	All locations, including those where dewatering is likely to take place.

6. Conclusion

An assessment of existing contamination at the site has been completed as per SEPP 55 including characterisation of the nature and extent of contamination within the accessible areas of the site. Based on the analytical results (WSP 2021) no soil conditions were encountered at the site that would preclude land use for the proposed development.

The EDD (WSP, 2021) undertaken at the site identified contaminants of concern in the groundwater at the site above the adopted assessment criteria. A source could not be identified based on the contamination distribution however, former or current operations within inaccessible areas of the site (i.e. inside the building footprints) which could not be targeted for investigation were considered to potentially be the source of these contaminants. As such, there is the potential for higher concentrations of these contaminants to be elsewhere on site and so a further contaminated land assessment, including soil vapour assessment, is recommended to be undertaken after site demolition and removal of the potential contamination sources and prior to site redevelopment.

Areas identified as requiring additional characterisation (i.e. inside the building footprints) would be further investigated during detailed design (post demolition) and investigation sampling plans would be informed by existing data and project design. All contamination investigations would be required to be undertaken by a suitably qualified and experienced person in accordance with guidelines made or approved under the Contaminated Land Management Act 1997 (NSW).



Yours sincerely

Imogen Powell
Team Manager NSW, Contaminated Land
Management

Encl: Limitations

Attachment A

Limitations



A.1 Limitations

This Report is provided by WSP Australia Pty Limited (WSP) for Charter hall Holdings (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated 24 November 2021 and agreement with the Client dated 9 December 2021 (Agreement).

PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (Permitted Purpose).

QUALIFICATIONS AND ASSUMPTIONS

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (Conclusions) are based in whole or in part on information provided by the Client and other parties identified in the report (Information), those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

The Conclusions are reflective of the current Site conditions and cannot be regarded as absolute without further extensive intrusive investigations, outside the scope of the services set out in the Agreement and are indicative of the environmental condition of the Site at the time of preparing the Report. As a general principle, vertical and horizontal soil or groundwater conditions are not uniform. No monitoring, common or intrusive testing or sampling technique can eliminate the possibility that monitoring or testing results or samples taken, are not totally representative of soil and / or groundwater conditions encountered at the Site. It should also be recognised that Site conditions, including subsurface conditions can change with time due to the presence and concentration of contaminants, changing natural forces and man-made influences.

Within the limitations imposed by the scope of the services undertaken by WSP, the monitoring, testing (intrusive or otherwise), sampling for the preparation of this Report has been undertaken and performed in a professional manner in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

WSP has prepared the Report without regard to any special interest of any person other than the Client when undertaking the services described in the Agreement or in preparing the Report.

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conditions; manifestations of latent conditions; or the impact of future events (including (without limitation) changes in policy, legislation, guidelines, scientific knowledge; and changes in interpretation of policy by statutory authorities); may require further investigation or subsequent re-evaluation of the Conclusions.

This Report can only be relied upon for the Permitted Purpose and may not be relied upon for any other purpose. The Report does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial

commitment or otherwise. It is the responsibility of the Client to accept (if the Client so chooses) the Conclusions and implement any recommendations in an appropriate, suitable and timely manner.

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