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Detailed Contamination Assessment

254 Tarean Road, Karuah

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EXECUTIVE SUMMARY

This report presents the findings of a Detailed Contamination Assessment (DCA) of 254 Tarean Road, Karuah NSW (the site), undertaken by JM Environments (JME). The site was identified as Lot 1 DP507141. The site was approximately 1.66 Ha in area. The site location is shown in Figure 1. The DCA was commissioned by the Roberts Development Group (RDG).

The site was used previously as a restaurant and was a service station prior to that. We understand that it is to re-develop the site into a service station.

Based on information gained from the desktop study and field observations, JME considers that the site was potentially contaminated by its previous and current land use.

The purpose of the DCA was to support a Development Application to re-establish the site as a service station.

Based on the results of this and the previous assessment, it was considered that the site had been impacted by groundwater contamination comprising TRH and PAH at concentrations exceeding the adopted site trigger values for commercial/ industrial land use and the presence of NAPL in the groundwater.

The following scope of works was undertaken:

- Review of previous assessments regarding the site and identification of potential AECs and COCs;
- Site walkover;
- Field work including the collection of soil and groundwater samples;
- Laboratory analysis;
- Tabulation of analytical results; and
- Preparation of this DCA report.

Groundwater in the forecourt area of site was impacted with TRH and PAH. Remediation of the groundwater including the following is recommended:

- Delineation of the groundwater contamination plume.
- Removal of underground petroleum storage systems infrastructure.
- Remediation of impacted soils and groundwater from the UPSS voids.

These actions should be undertaken with guidance of a Remediation Action Plan that is prepared and implemented by suitably certified, qualified and experienced person(s).

JME considers that the duty to report the contamination to the EPA has not been triggered provided the site is satisfactorily remediated

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ACRONYMS

ABC	assumed background concentration
ACL	added contaminant limits
ACM	asbestos containing material
AEC	Area of Environmental Concern
ALS	ALS Pty Ltd, Sydney
APHA	American Public Health Association
ASS	acid sulfate soils
BaP	benzo[a]pyrene
BaP TEQ	benzo[a]pyrene toxicity equivalent quotient
BTEX	benzene, toluene, ethylbenzene and xylenes
BTEXN	benzene, toluene, ethylbenzene, xylenes and naphthalene
CEC	cation exchange capacity
CLM Act	NSW Contaminated Land Management Act 1997
COC	Contaminant of Concern
CoC	Chain of Custody
CSM	Conceptual Site Model
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
DA	Development Application
DBYD	Dial-Before-You-Dig
DCA	Detailed Contamination Assessment
DEC	NSW Department of Environment and Conservation
SSC	default guideline values
DP	Deposited Plan
DQI	Data Quality Indicator
DQO	Data Quality Objective
EIL	ecological investigation level
ENM	excavated natural material
EPA	Environment Protection Authority
ESL	ecological screening level
HIL	health investigation level
HSE	health, safety and the environment

HSL	health screening level
JME	JM Environments
LEP	Local Environmental Plan
LOR	limit of reporting
mbgl	metres below ground level
NAPL	Non-aqueous phase liquid
NATA	National Association of Testing Authorities
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
NOEH	NSW Office of Environment and Heritage
OCP	organochlorine pesticides
OPP	Organophosphorus pesticides
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PIL	phytotoxicity based investigation level
POEO Act	NSW Protection of the Environment Operations Act 1997
PPE	Personal Protective Equipment
PSC	Lake Macquarie Council
QA/QC	Quality Assurance/Quality Control
RAP	Remedial Action Plan
RPD	relative percentage difference
SD	standard deviation
SGS	SGS Australia, Sydney
SPT	Standard Penetrometer Test
SWMS	Safe Work Method Statements
TPH	total petroleum hydrocarbons
TRH	total recoverable hydrocarbons
UCL	upper confidence limit
USEPA	United States Environment Protection Authority
VENM	virgin excavated natural material
VOC	volatile organic compound

1 INTRODUCTION

This report presents the findings of a Detailed Contamination Assessment (DCA) of 254 Tarean Road, Karuah NSW (the site), undertaken by JM Environments (JME). The site was identified as Lot 1 DP507141. The site was approximately 1.66 Ha in area. The site location is shown in Figure 1. The DCA was commissioned by the Roberts Development Group (RDG).

The site was used previously as a restaurant and was a service station prior to that. We understand that it is to re-develop the site into a service station. A preliminary contamination assessment has been undertaken by JME. JME assessed that:

- Historical aerial photography indicated the site was cleared of vegetation including grass prior to 1967 and was being used a service station with a managers residence located to the west of the service station building.
- Dangerous goods records and Council records indicate that the site was used a service station until 2005.
- The site was used as restaurant from 2005 until 2015.
- The site was approved for landfilling in 2000.

Based on information gained from the desktop study and field observations, JME considers that the site was potentially contaminated by its previous and current land use.

The purpose of the DCA was to support a Development Application to re-establish the site as a service station.

2 SCOPE OF WORK

The objectives of this assessment were to:

- Identify potentially contaminating activities that are currently being performed on the site, and that may have been performed on the site in the past;
- Assess Areas of Environmental Concern (AECs) and Contaminants of Concern (COCs) on the site; and
- Provide recommendations on further assessment or remediation, if considered necessary.

The proposed scope of work was prepared in accordance with the following guidelines and documents:

- National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 2013;
- ; and
- NSW Environment Protection Authority (EPA) Guidelines for the NSW Site Auditor Scheme 3rd Edition (October 2017).

The following scope of works was undertaken:

- Review of previous assessments regarding the site and identification of potential AECs and COCs;
- Site walkover;
- Field work including the collection of soil and groundwater samples;
- Laboratory analysis;

- Tabulation of analytical results; and
- Preparation of this DCA report.

3 SITE IDENTIFICATION

General site information is provided in Table 1. The site location is shown in Figure 1.

TABLE 1: SUMMARY OF SITE DETAILS

Site Address:	254 Tarean Road, Karuah NSW
Site Area:	Approximately 1.66 Hectares
Site Identification	Lot 1 DP507141. Local Government Area of Port Stephens Parish of Tarean County of Gloucester
Current Land Use:	Vacant
Previous Land Use:	Restaurant and Service Station prior to that
Proposed Land Use:	Service Station
Adjoining Site Uses:	Residential to the north Rural to the south, east and west
Site Coordinates:	401266 mE, 6386722 mN (centre of site)
Current Zoning:	RU2 Rural Landscape

4 PREVIOUS CONTAMINATION ASSESSMENTS

JME21073-1 – 254 Tarean Road Karuah- Preliminary Contamination Assessment prepared by JME 3 December 2021 (hereon referred to as JME2021) was reviewed by JM Environments and the following information was provided in JME2021.

4.1 Environmental Setting

4.1.1 Site Topography

the site lies on a shallow saddle point and gently slopes down to the east southeast. The site's elevation is approximately 15m AHD. Surface water would flow overland into an unnamed ephemeral stream to the southeast of site. The unnamed stream discharges into wets lands of the Karuah River approximately 1.1km southeast of site.

4.1.2 Soil Landscape

The site lies on the Ten Mile Road Soil Landscape, defined as:

- Landscape—undulating low hills on Carboniferous sediments and acid volcanics in the Medowie Lowlands and Clarencetown Hills regions. Local relief is 40–80 m. Elevation is 70–150 m. Slopes are 5–10%. Uncleared open-forest.
- Landscape Variant—tma—rolling low hills, slopegradients 10–20%.
- Soils—moderately deep (55 cm) to deep (>200 cm), well to imperfectly drained brown Soloths (Db1.41), yellow Soloths (Dy2.41, Dy3.41), and shallow (<45 cm), well-drained Bleached Loams/Lithosols (Um2.12, K-Um2.12).
- Qualities and Limitations—high water erosion hazard, localised shallow soils, high run-on and seasonal waterlogging, strongly to extremely acid soils of low fertility

4.1.3 Geology

The Newcastle 1:250,000 Geological Series Sheet S1 56-2 indicated that the site was located on Carboniferous Age sediments mostly clastics with some organics.

4.1.4 Acid Sulfate Soils

The site was not mapped by The NSW Department of Planning, Industry and Environment – "eSPADE NSW Soil and Land Information" online services Acid Sulfate Soil Risk Mapping.

4.1.5 Groundwater

There were no registered boreholes within 500 m of the site. Groundwater is expected to flow in a south/south easterly direction and discharge into Port Stephens.

4.2 Site History Summary

The site lies approximately 800m west of Karuah. Historical titles indicate the site was subdivided from a larger parcel of land in 1963 and was leased by service station operators from 1964. Historical aerial photography indicated the site was cleared of vegetation including grass prior to 1967 and was being used a service station with a managers residence located to the west of the service station building. Dangerous goods records and Council records indicate that the site was used a service station until 2005. The site was used as restaurant from 2005 until 2015. The site was approved for landfilling in 2000.

5 SAMPLING and ANALYSIS QUALITY PLAN

5.1 Preliminary Conceptual Site Model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e. it enables an assessment of the potential source – pathway – receptor linkages (complete pathways). The preliminary CSM is summarised in Table 2.

Table 2: Preliminary Conceptual Site History

Known and Potential Primary Sources	Primary Release Mechanism	Secondary Release Mechanism	Potential Impacted Media	Contaminants of Concern	Exposure Pathways	Potential Receptors
Importation of fill Use of solvents and degreasers Handling and disposal of waste oils Weathering and maintenance of building materials Faecal coliforms	Leaks, poor storage, handling and disposal practices of petroleum hydrocarbons and chlorohydrocarbons Building materials falling on unsealed ground surfaces	Volatilisation of contaminants	Air	VOC (including BTEXN) TRH F1 and F2 Phenols	Inhalation	On-site residents and visitors, future workers and site users
		Transport of contamination via groundwater migration	Groundwater	BTEX TRH PAH Chlorinated hydrocarbons and trimethylbenzenes Heavy metals Phenols PCB OCP	Dermal contact Inhalation Ingestion	Local ecology Recreational users of surface waters (water activities and fishing) Down gradient surface water users
		Disturbance of soils	Soil	BTEX TRH PAH Chlorinated hydrocarbons and trimethylbenzenes Heavy metals Phenols PCB OCP Asbestos	Dermal contact Inhalation Ingestion	On-site residents and visitors, future workers and site users

5.2 Data Quality Objectives

5.2.1 Step 1 State the Problem

The contamination status of the site was unknown. RDG had requested the preparation of a DCA to support the submission of a DA.

5.2.2 Step 2 Identify the Goal of the Study

The goal of the study was to provide an assessment as to whether the site was suitable, from a contamination point of view, for its proposed (and former) use as a Service Station.

5.2.3 Step 3 Identify the Inputs Into the Decision

Inputs to the assessment of the site's contamination status were to include:

- Results of the desktop study;
- Field observations regarding depth of fill (if present) on the site;
- The results of sampling and laboratory analysis of soils and groundwater; and
- Comparison of laboratory results with soil assessment criteria derived in Section 7.7.

5.2.4 Step 4 Define the Site Boundaries

The lateral extent of the site was defined as Lot 1 DP507141; the site is approximately 1.66 hectares in area. The site location is shown in Figure 1.

The vertical extent was defined as 0.2m beyond the base of fill.

5.2.5 Step 5 Develop an Analytical Approach

The analytical approach was to be as follows:

- Data Quality Indicators (DQIs) were to be applied as per Section 5.7.1. If the results of the analytical data validation were acceptable with respect to the DQIs, then the data was to be deemed suitable for the purposes of this assessment; and
- Analytical results from this assessment were to be assessed against criteria established in Section 5.5 and 5.6. If contaminant concentrations were less than or equal to the adopted site-specific criteria (SSCs), it would indicate the site's suitability for its ongoing industrial land use.

5.2.6 Step 6 Specify the Performance or Acceptance Criteria

Potential decision errors were considered to include:

- Sampling errors, which occur when collected samples are not representative of conditions within the investigation area; and
- Measurement errors, which occur during sample collection, handling, preparation, analysis and data production.

These errors may lead the decision maker to make the following errors:

- Deciding that the investigation area is suitable for residential land use when it is actually not; and
- Deciding that the investigation area is not suitable for residential land use when it actually is.

An assessment was to be made as to the likelihood of a decision error being made based on the results of a Quality Assurance/Quality Control (QA/QC) assessment, and the closeness of analytical results to the investigation criteria outlined in Section 5.5 and 5.6. It was considered

that a margin for error would be accounted for by the level of conservatism built into guideline SSCs.

5.2.7 Step 7 Optimise the Design for Obtaining Data

In order to optimise the efficiency of data collection:

- JME was to use available desktop resources (including previous contamination assessments) to allow sampling operations to be focussed in areas where less information was currently available;
- A drilling rig was to be used to install groundwater monitoring wells; and
- A 20 tonne excavator was to be used to assess the constituents with the fill and the depth of fill

In order to optimise the quality of data collected, JME was to use:

- Experienced JME field staff to collect samples;
- National Association of Testing Authorities (NATA)-accredited laboratories. Laboratory analysis was to be in accordance with the requirements of the NEPM Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils, and to be referenced to United States Environment Protection Authority (USEPA) or American Public Health Association (APHA) methods.

Details of sampling methods and analytical requirements are discussed in Section 5.3.

5.3 Sampling Plan

5.3.1 Sampling Location Rationale

The NSW EPA Sampling design part 1 - application guidelines (2022) recommend a minimum of 27 sampling points in order to characterise a site of around 1.66 hectares, with respect to contamination. In order to satisfy this recommendation, JME proposed to sample from 27 test pits and4 groundwater wells as part of this assessment.

Five bore wells were drilled to target the groundwater within the vicinity of the underground storage tanks.

5.3.2 Sampling Procedures

Test pits were to be excavated using a 20 tonne excavator. Soil samples were to be collected from the surface, and at approximately 1m intervals in fill thereafter. Additional samples were to be collected at observed changes in lithology. The samples were collected from the centre of the excavator bucket using disposable gloves.

Test pits were to be terminated approximately 0.2m beyond the base of fill.

Boreholes will be drilled using a drilling rig fitted with solid flight augers, and logged to record changes in lithology and sampling intervals. Particular note will be made of the base of fill, and depth at which groundwater is encountered, based on the driller's observations and visual observation of samples.

In each well, a maximum 3m of machine-slotted 50mm class 18 u-PVC screen will be installed over an interval from 2m below to 1m above the perceived top of groundwater. 50mm solid class 18 u-PVC casing will be installed from the top of the slotted screen to approximately 0.5m above the ground surface. The annulus around the casing will be filled with clean coarse sand and gravel to approximately 0.3m above the top of the slotted casing. Bentonite will be placed in the annulus above the sand, and protruding casing will be left in place as a standpipe.

Following installation, groundwater wells will be developed using a Typhoon™ submersible pump to surge the hole, and then to rapidly pump out accumulated groundwater. This procedure is designed to remove from the hole sediment and water stirred up during drilling operations. Prior to well development, any personnel handling decontaminated well development equipment that directly contacts bore water must wash their hands with plain soap and rinse thoroughly in tap water before donning a clean, new pair of disposable nitrile gloves. A new pair of nitrile gloves must be worn for each well developed.

Test pits and boreholes were to be logged to record changes in lithology and sampling intervals, and locations were to be recorded on a site plan.

5.4 Analysis Plan

Primary and duplicate samples were to be analysed by SGS Australia (SGS), Sydney, and triplicate samples were to be analysed by ALS Pty Ltd (ALS), Sydney. Selected samples were to be analysed for the following:

- Heavy metals (As, Cd, Cr, Cu, Pb, Ni, Zn, Hg);
- Total Recoverable Hydrocarbons (TRH);
- Polynuclear Aromatic Hydrocarbons (PAH);
- Volatile Organic Compounds (VOCs);
- Benzene, toluene, ethylbenzene and xylenes (BTEX);
- pH;
- Cation exchange capacity (CEC); and
- Asbestos in soil (if observed in fill layers).

Laboratory analytical methods are summarised in Table 3.

TABLE 3: SUMMARY OF ANALYTICAL METHOD REFERENCES

Analysis	Medium	SGS Reference	ALS Reference
Metals	Soil/Water	USEPA Method 200.8 and 6010C	APHA 3120 and USEPA SW 846 - 6010
Mercury	Soil/Water	APHA 3112 and 3500	AS 3550 and APHA 3112
BTEXN	Soil/Water	USEPA 5030B, 8020A and 8260	USEPA SW 846 - 8260B
TRH	Soil/Water	USEPA 5030B, 8020A and 8260	USEPA SW 846 - 8260B and USEPA SW 846 - 8015A
PAH	Soil/Water	USEPA 3500C and 8270D	USEPA SW 846 - 8270D
VOC	Soil/Water	USEPA 5030B, 8020A and 8260	-
Phenols	Soil/Water	USEPA 3500C and 8270D	-
OCP/PCB	Soil/Water	USEPA 3510, 3550, 8140, 8080, 3500C and 8270D	-
pH	Soil	APHA 4500-H+	-

5.5 Soil Assessment Criteria

Soil SSCs were established from the NEPM Schedule B1, Guideline on Investigation Levels for Soil and Groundwater. The NEPM provides a framework for the use of investigation and screening levels. The framework is based on a matrix of human health and ecological soil investigation screening levels and guidance for specific contaminants. The selection of the most

appropriate investigation levels for use in a range of environmental settings and land use scenarios should consider factors including the protection of human health, ecosystems, groundwater resources and aesthetics. A balance between the use of generic soil, soil vapour and groundwater criteria and site-specific considerations is essential practice in site assessment.

The site's current zoning is Light Industrial. It is not known what Australian Caravans propose to use the sub divided lots for. JME has assumed that the final layout for each lot when developed will be fully paved with concrete and/or bitumen with no access to soils. JME considers the land use setting applicable to the site to be:

- HIL D - commercial/industrial such as shops, offices, factories and industrial sites.

Soil health investigation level (HILs), health screening levels (HSLs), ecological investigation level (EILs), ecological screening level (ESLs) and management limits were developed from:

- Table 1A(1) Health investigation levels for soil contaminants;
- Table 1A(3) Soil HSLs for vapour intrusion;
- Table 1B(1) Soil-specific added contaminants for aged zinc in soil (dependent on soil pH and CEC;
- Table 1B(2) Soil-specific added contaminant limits for aged copper in soils (dependent on soil pH or CEC);
- Table 1B(3) Soil-specific added contaminant limits for aged chromium III (dependent on
- % clay) and nickel (dependent on CEC) in soil;
- Table 1B(4) Generic added contaminant limits for lead in soils irrespective of their physicochemical properties;
- Table 1B(5) Generic EILs for aged As, fresh DDT and fresh naphthalene in soils irrespective of their physicochemical properties;
- Table 1B(6) ESLs for TPH fractions F1 – F4, BTEX and benzo[a]pyrene in soil;
- Table 1B(7) Management Limits for TPH fractions F1-F4 in soil;
- Table 7 Health screening levels for asbestos contamination in soil; and
- NEPM 1999 Errata Updated 30 April 2014.

No EILs are listed for cadmium or mercury, hence the provisional phytotoxicity based investigation levels (PILs) from Column 5 of Appendix II of the NSW Department of Environment and Conservation (DEC) Guidelines for the NSW Site Auditor Scheme (2nd edition) have been adopted.

The ESL for benzo[a]pyrene (BaP) listed in the NEPM is derived from an older set of Canadian soil quality guidelines, which have subsequently been revised. A higher reliability ecological guideline value for BaP has been adopted from CRC CARE Technical Report No. 39 'Risk-based management and remediation guidance for benzo(a)pyrene'.

Where a COC has a level listed in more than one table, the more conservative value was adopted as the SSC.

Tables 1B (1-3) require that CEC and soil pH be analysed in order to select added contaminant limits (ACL) values for zinc, copper and nickel. ACLs were selected based on the most conservative (ie lowest) values for CEC (5.1cmol$_c$/kg) and pH (4.8) detected during this assessment.

EILs for copper, chromium, nickel, lead and zinc were calculated by adding the ACL to an assumed background concentration (ABC) for 'old suburb, high traffic' sites (taken from NEPM

Schedule B5c, Guideline on Ecological Investigation Level for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel & Zinc).

Sampled material was observed to be predominantly clay therefore, where ESLs are dependent on particle size, the fine or clay grain size has been used.

Adopted SCCs are shown in Table 4.

TABLE 4: SOIL ASSESSMENT CRITERIA

Analyte Name	Units	HIL	HSL	EIL	ESL	ACL	ABC	Management Limit
Benzene	mg/kg	-	3	-	75	-	-	-
Toluene	mg/kg	-	-	-	135	-	-	-
Ethylbenzene	mg/kg	-	-	-	165	-	-	-
Xylenes	mg/kg	-	230	-	180	-	-	-
TRH C6-C10 (F1)	mg/kg	-	250	-	215	-	-	700
TRH >C10-C16 (F2)	mg/kg	-	-	-	170	-	-	1,000
TRH >C16-C34 (F3)	mg/kg	-	-	-	1,700	-	-	3,500
TRH >C34-C40 (F4)	mg/kg	-	-	-	3,300	-	-	10,000
Naphthalene	mg/kg	-	-	370	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	172	-	-	-
BaP TEQ	TEQ	40	-	-	-	-	-	-
Total PAH	mg/kg	4,000	-	-	-	-	-	-
Total Phenols	mg/kg	240,000	-	-	-	-	-	-
Cresols	mg/kg	25,000						
DDT	mg/kg	-	-	640	-	-	-	-
DDT+DDE+DDD	mg/kg	3,600	-	-	-	-	-	-
Aldrin and Dieldrin	mg/kg	45	-	-	-	-	-	-
Chlordane	mg/kg	530	-	-	-	-	-	-
Endosulfan	mg/kg	2,000	-	-	-	-	-	-
Endrin	mg/kg	100	-	-	-	-	-	-
Heptachlor	mg/kg	50	-	-	-	-	-	-
HCB	mg/kg	80	-	-	-	-	-	-
Methoxychlor	mg/kg	2,500	-	-	-	-	-	-
Chlorpyrifos	mg/kg	2,000	-	-	-	-	-	-
Total PCBs	mg/kg	7	-	-	-	-	-	-
Arsenic, As	mg/kg	3,000	-	160	-	-	5	-
Cadmium, Cd	mg/kg	900	-	3	-	-	-	-
Chromium, Cr	mg/kg	3,600	-	330	-	310	15	-
Copper, Cu	mg/kg	240,000	-	170	-	140	30	-
Lead, Pb	mg/kg	1,500	-	2,000	-	1,800	160	-
Nickel, Ni	mg/kg	6,000	-	60	-	55	5	-
Zinc, Zn	mg/kg	400,000	-	480	-	360	120	-
Mercury	mg/kg	730	-	1	-	-	-	-
Bonded ACM	%	-	0.05%	-	-	-	-	-
FA and AF (friable asbestos)	%	-	0.001%	-	-	-	-	-
All forms of asbestos	No visible asbestos for surface soil							

In the NEPM, the preferred approach is to examine a range of summary statistics including the contaminant range, median, arithmetic/geometric mean, standard deviation (SD) and 95% upper confidence limit (UCL).

The NEPM recommends, at the very least, the maximum and the 95% UCL of the arithmetic mean contaminant concentration should be compared to the relevant SSC. The implications of localised elevated values (hot spots) should also be considered. The results should meet the following criteria:

- The SD of the results should be less than 50% of the relevant investigation or screening level; and
- No single value should exceed 250% of the relevant investigation or screening level.

Laboratory results were compared with soil investigation and screening levels for commercial/industrial land use. The comparisons are summarised in Summary Tables 1-3 (attached).

5.6 Groundwater Assessment Criteria

5.6.1 Drinking Water

Because the site is located in an area with a reticulated water supply, it is unlikely that groundwater would be used for domestic drinking purposes.

5.6.2 Protection of Aquatic Ecosystems

The investigation levels presented on the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG) website are considered applicable for the protection of the ecosystems of receiving waters. As these guidelines apply to receiving waters, it is generally conservative to apply these to groundwater on site.

ANZG advocates a site-specific approach to developing guideline trigger values, based on such factors as local biological effects data, the current level of disturbance of the ecosystem, etc. The guidelines provide detailed approaches and advice on identifying appropriate guideline values for selected indicators. These guideline values help to ensure that agreed community values and their management goals are protected.

The nearest surface water receptor is Jewells Swamp, approximately 285m south of site. The default guideline values from ANZG were based on slightly to moderately disturbed fresh water.

Adopted criteria are shown in Table 5 (below).

TABLE 5: ADOPTED GROUNDWATER CONTAMINANT TRIGGER VALUES

Analyte Name	Units	Adopted Trigger Value	Reliability/Comment
Benzene	µg/L	950	Moderate
Toluene	µg/L	180	Unknown
Ethylbenzene	µg/L	80	Unknown
m/p-xylene	µg/L	75	Unknown
o-xylene	µg/L	350	Low
TRH F1	µg/L	25	Laboratory limit of reporting

Analyte Name	Units	Adopted Trigger Value	Reliability/Comment
TRH F2	µg/L	25	Laboratory limit of reporting
TRH F3	µg/L	90	Laboratory limit of reporting
TRH F4	µg/L	120	Laboratory limit of reporting
Anthracene	µg/L	0.01	Unknown
Benzo(a)pyrene	µg/L	0.1	Unknown
Fluoranthene	µg/L	1.0	Unknown
Naphthalene	µg/L	16	Low
Phenanthrene	µg/L	0.6	Unknown
Arsenic	µg/L	13	moderate
Cadmium, Cd	µg/L	0.2	very high
Chromium, Cr (VI)	µg/L	1.0	very high
Copper, Cu	µg/L	1.4	very high
Lead, Pb	µg/L	3.4	moderate
Nickel, Ni	µg/L	11	low
Zinc, Zn	µg/L	8	very high
Mercury	µg/L	0.06	moderate

5.7 Quality Assurance/Quality Control Plan

The QA/QC plan was designed to achieve predetermined DQIs that would demonstrate accuracy, precision, comparability, representativeness and completeness of the data generated.

5.7.1 Data Quality Indicators for the Project

DQIs for the project were to be based on field and laboratory considerations in the table in Appendix V of the NSW DEC Guidelines for the NSW Site Auditor Scheme (2nd Edition). Specific DQIs for field and laboratory QA/QC samples are shown in Table 6.

TABLE 6: DATA QUALITY INDICATORS

Type of Quality Control Sample	Control Limit
Duplicate Samples	RPDs within 50% for analyte concentrations greater than 5 x LOR.
Trip Blanks	Analytes not detected.
Trip Spike	Analytes detected at greater than 80% recovery
Spikes	Laboratory spike acceptance limits are a "live" range and updated regularly. The laboratory acceptance limits at the time of analysis will be used.
Blanks	Analytes not detected.

A review of the DQIs was to be undertaken to assess the usability and representative nature of data generated from the project. The outcome of the DQI assessment would either:

- Recommend the data is suitable to be used for the project; or
- Limit the suitability of the data to be used, or
- Recommend further contamination sampling.

5.7.2 Sampling Protocols

The following sampling protocols were to be observed during the project:

- Test pit samples were to be collected from the centre of the excavator bucket load, to reduce the potential for cross-contamination;
- Samples were to be collected using a clean pair of disposable nitrile gloves, which were to be changed between each sample;
- Samples were to be placed into appropriate laboratory-supplied glass jars with Teflon™ lined lids, and kept on ice during transport to the laboratory;
- Samples were to be dispatched to the laboratory under chain of custody (CoC) conditions. CoC documentation was to include:
    - sample identification of each sample;
    - date sampled; and
    - date dispatched to the laboratory; and
- Samples were to be dispatched within two days of collection, to avoid holding time exceedances.

5.7.3 Field Quality Control Samples

The following quality control samples were to be collected in the field:

- Intra-laboratory duplicate samples were to be collected at the rate of 1 per 20 primary samples collected;
- Inter-laboratory triplicate samples were to be collected at the rate of 1 per 20 primary samples collected;
- The relative percentage difference (RPD) of analyte concentrations between duplicates and triplicates and their respective primary samples was to be calculated to assess whether field sampling procedures produce reproducible results; and
- Trip blank and trip BTEX spike samples were to accompany samples to SGS.

5.7.4 Laboratory Quality Control

Laboratory quality control protocols were to include the following:

- Laboratory analysis of samples was to be undertaken by NATA-accredited environmental testing laboratories;
- Laboratories were to implement a quality control plan conforming to the NEPM Schedule B3 Guidelines for Analysis of Potentially Contaminated Soils;
- Laboratory methods were to conform with USEPA methods (laboratory analytical methods are summarised in Table 7);
- Laboratories were to analyse reagent blanks, spike samples, duplicate spikes, matrix spikes, and surrogate spikes and duplicates to assess the laboratory's quality control; and
- Laboratories were to extract and/or analyse the samples within the required holding times. A summary of the holding times for extraction and/or analysis for COCs in this assessment is shown in Table 11.

TABLE 7: EXTRACTION AND ANALYSIS HOLDING TIME SUMMARY

Analysis	Medium	Extraction	Analysis
BTEXN	Soil/water	14 days	35 days from extraction
TRH	Soil/water	14 days	35 days from extraction
PAH	Soil/water	14 days	35 days from extraction
VOC	Soil/water	14 days	35 days from extraction
Metals	Soil/water	6 months	6 months
Mercury	Soil/water	26 days	26 days
Phenols	Soil/water	14 days	35 days from extraction
OCP/OPP/PCB	Soil/water	14 days	35 days from extraction
pH	Soil	7 days	4 days from extraction
CEC	Soil	26 days	26 days

6 FIELD WORK

Test pit and monitoring well locations are recorded in Figure 2.

6.1 Soil Sampling

Soil sampling was conducted by a JME environmental scientist on 7 and 9 November 2023. Soil samples were from the fill and natural soils from each test pit. Test logs are presented in Appendix A.

Groundwater with a small amount light non-aqueous phase liquid (LNAPL) was observed flowing into the corner nearest a UST of test pit TP5. Based on this observation it was decided to abandon test pit TP5 and not excavate test pits TP3, TP4 and TP11 to reduce the risk of spreading the LNAPL.

6.2 Groundwater Sampling

Groundwater monitoring wells were installed 8 December 2023 by licenced drillers FICO Group. The monitoring wells were installed approximately 4m depth. Monitoring wells MW1, MW2 and MW3 were terminated in extremely hard rock. MW4 was terminated in natural clay. Monitoring well installation logs are presented in Appendix A. The groundwater wells were sampled on 15 December 2023.

7 LABORATORY ANALYSIS

Primary and duplicate samples were analysed by SGS, Sydney, and triplicate samples were analysed by ALS, Sydney. Selected soils samples were analysed for the following:

- BTEXN;
- TRH;
- PAH;
- VOC;
- Heavy metals (As, Cd, Cr, Cu, Pb, Ni, Zn and Hg);
- Speciated Phenols;
- OCP;
- PCB;
- Asbestos

- pH; and
- CEC.

Groundwater samples were analysed for the following:

- BTEXN;
- TRH;
- PAH;
- Heavy metals (As, Cd, Cr, Cu, Pb, Ni, Zn and Hg);

8 QUALITY ASSURANCE / QUALITY CONTROL

8.1 Soil QA/QC Review

Test pit samples were collected from the centre of the excavator bucket load, to reduce the potential for cross-contamination. Soil samples were collected using a clean pair of disposable nitrile gloves, which were changed between each sample. Soil samples were placed into appropriate laboratory-supplied glass jars with Teflon™ lined lids. Soil samples were kept on ice during transport, and received by the primary laboratory at a temperature of 14.3°C.

Samples were transported to the laboratory under CoC conditions (CoC documentation is included in Appendix B) and received by the laboratories with sufficient time to undertake analyses within specified holding times.

During the assessment, soil field duplicate and triplicate samples were collected and analysed, to check whether field sampling procedures produced reproducible results. The RPD of analyte concentrations between duplicates and their respective primary samples were calculated to be within the acceptance criterion of 50% for concentrations greater than 5x the laboratory limit of reporting (LOR), with the following exceptions (note that RPD calculations that rely of the addition of individual analytes or bands of analytes are not considered relevant):

- TP26-0 and QC1 (QC1A)
    - Copper 55% (24%)
    - Nickel 51% and
    - Zinc 52%

In each case primary, duplicate and triplicate concentrations were below the adopted SSC and as such these RPD results do not affect the interpretation of the results. RPD results are included in Summary Table 5 (attached).

During the assessment a ‘trip spike’ sample was submitted and analysed to assess the potential for loss of volatile contaminants during transit. Analytes were detected at concentrations between 89% and 102% of the expecetd value.

During the soils assessment a ‘trip blank’ sample was submitted and analysed to assess the potential for cross-contamination between samples. Analytes were not detected at concentrations above the laboratory LOR.

QA/QC results are included in Summary Table 5 (attached).

SGS was NATA-accredited for the analyses requested. SGS conducted internal quality control using spikes, laboratory duplicates and method blanks. A review of SGS's data quality objectives (DQOs) for the analysis of soil samples indicated that DQOs were met, with the exception of:

- pH in soil was extracted out of holding time by the laboratory. The samples were stored in fridge at 4°C awaiting extraction. The holding time breach is unlikely to affect the interpretation of the results;
- Duplicate analysis for PAH for four individual compounds and PAH summation value in one sample. The relevant primary and duplicate concentration was below the SSC;
- Duplicate analysis for Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES for 4 items, due to sample heterogeneity. In each case the primary and duplicate concentration was below the SSC
- Matrix Spike analysis for Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES for 2 items, due to matrix interference; and
- Matrix Spike analysis for TRH (Total Recoverable Hydrocarbons) in Soil for 1 item, due to matrix interference.

8.2 Groundwater QA/QC

Groundwater samples were collected using a low flow peristaltic pump with a new sampling train for each well. The samples were field filtered for metals analysis and collected in laboratory supplied plastic bottles. Groundwater samples were kept on ice during transport to the laboratory Newcastle depot, and received by the primary laboratory at a temperature of 20.2°C.

During the assessment, a groundwater field duplicate was collected and analysed, to check whether field sampling procedures produced reproducible results. The RPD of analyte concentrations between duplicates and their respective primary samples were calculated to be within the acceptance criterion of 50% for concentrations greater than 5x the laboratory limit of reporting (LOR) with the exception of zinc. Zinc was not detected above the laboratory limit of reporting (2µg/l) in the primary sample and detected at 17µg/L in the duplicate sample. The higher duplicate result was adopted for the interpretation of the groundwater results.

SGS was NATA-accredited for the analyses requested. SGS conducted internal quality control using spikes, laboratory duplicates and method blanks. A review of SGS's data quality objectives (DQOs) for the analysis of soil samples indicated that DQOs were met.

8.3 QA/QC General

Based on a review of QA/QC results it is considered that analytical results are indicative of the contamination status of the site at the time of sampling.

Laboratory QA/QC documentation is included in Appendix B.

9 RESULTS

9.1 Field Observations

9.1.1 Soil Observations

Sampling locations are shown in Figure 2, borehole and test pit logs are included in Appendix A. Test Pit photographs are included in Appendix C.

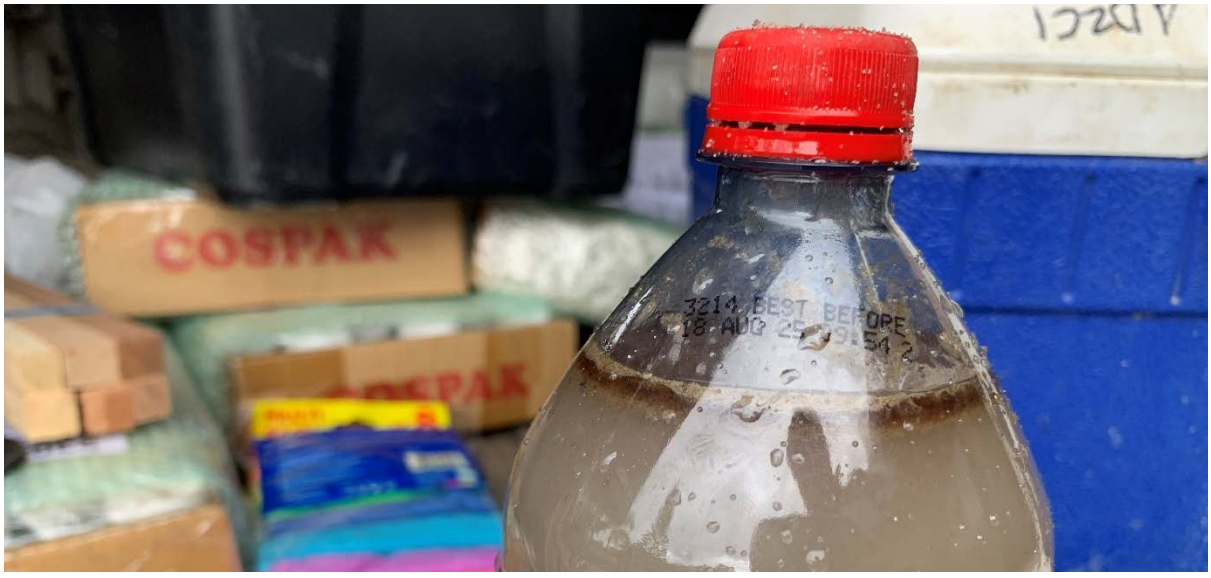
The southern and western portion of site have been filled. The southeastern portion was filled predominately with clay soils and the southwestern and western portion was filled predominately with crushed rock and covered with quarried gravel and or road base. The fill was up to 2.5m deep (test pit TP7) and was generally around 1m deep. Some shallow fill was located beneath the concrete pavement of the former service station and was won potentially from site. The forecourt area, which houses the underground storage tank farm, appears to be constructed on/in shallow igneous rock. Excavation of test pit TP5 required the use of a rock in order the excavate the rock which was encountered at approximately 0.5m below ground surface. Excavation of TP5 was abandoned in part to the hardness of the rock and also the observation of NAPL flowing in with the groundwater. Based on these observations, proposed test pits TP3, TP4 and TP11 were not excavated.

No significant anthropogenic material was observed in the fill with the exception of:

- Test pit TP17 – 0.6m-1.1m sandy GRAVEL with some metal pipe, glass and grass clippings;
- Test pit TP18 – 0.35m-0.5m asphalt (possibly an old pavement);
- Test pit TP19 – 0.4m-1.4m sandy gravelly SILT with some metal, a magnum wrapper, a plastic soft drink bottle and a fan belt (possibly previous surface material that has been filled over);
- Test pit TP20 – 0.1m-0.8m sandy CLAY and clayey SAND with some bricks and one piece of asbestos containing material; and
- Test pit TP24 – 1.1m asphalt (possibly an old pavement).

9.1.2 Groundwater Field Results

Groundwater field measurements are listed in Table 8, and borehole logs are included in Appendix A. No NAPL was observed in the wells. NAPL was observed in test pit TP5. A sample of the NAPL was collected



Monitoring wells MW1, MW2 and MW3 were installed in the forecourt area down hydraulic gradient from the underground. The subsurface consisted approximately 0.5m of fill underlain with either olive grey clay then olive/grey igneous rock or olive/brown clay then purple rock (sandstone?). Monitoring wells were slow to recharge. Monitoring well MW1 did not produce sufficient water to sample.

Monitoring well MW 4 was installed down ground gradient of the underground diesel tank and potentially within the diesel tank's backfill. Water recharge was relatively quick.

TABLE 8: MONITORING WELL GROUNDWATER PROPERTIES 14 December 2023.

Well	Depth to Groundwater (mbgs)	Dissolved Oxygen (ppm)	Electrical Conductivity (µS/cm)	pH	Redox Potential (mV)	Temperature (°C)
MW1	2.374	Limited sample				
MW2	1.5	0.03	919	6.99	-150.6	22.9
MW3	1.595	0.05	684	7.04	-152.2	27.5
MW4	2.459	0.14	306.4	8.79	-152.6	22.2

9.2 Laboratory Results

9.2.1 Soil Analytical Results

Laboratory results are summarised in Summary Tables 1-3 (attached) and laboratory documentation is attached in Appendix B.

Sampling locations are shown in Figures 2.

The following analytes were not detected at concentrations above the laboratory LOR:

- Benzene;
- Toluene;
- Ethylbenzene;
- Xylenes;
- OCP;
- PCB;

The following analytes were detected at concentrations above the laboratory LOR, but below adopted human health and ecological trigger values:

- TRH F3 and F4;
- Naphthalene;
- BaP;
- BaP TEQ;
- Total PAH;
- Arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury.

TRH F2 was detected above the ecological trigger value (170 mg/kg) in sample TP5-1 (1,100mg/kg)

9.2.2 Groundwater Analytical Results

The groundwater analytical results are summarised in Summary Table 4.

Monitoring well MW1 did not produce sufficient water for sample analysis and was suspected that drilling spoil self-cemented in the annulus and sealed the borehole.

The following analytes were detected above the adopted trigger values:

- Monitoring Well MW2:
    - TRH F1 – 4,200µg/L (trigger value 25µg/L)
    - TRH F2 – 14,000 µg/L (trigger value 25µg/L)
    - TRH F3 – 8,500µg/L (trigger value 90µg/L)
    - Anthracene – 2.1µg/L (trigger 0.01µg/L)
    - Fluoranthene – 1.7µg/L (trigger value 1.0µg/L)
    - Naphthalene – 250µg/L (trigger value 16µg/L)
    - Phenanthrene – 45µg/L (trigger value 45µg/L)
- Monitoring Well MW3:
    - TRH F1 – 83µg/L
    - TRH F2 – 1,400µg/L
    - TRH F3 – 1,400µg/L
    - Naphthalene – 28µg/L
    - Phenanthrene – 1.9µg/L
    - Arsenic – 15µg/L (trigger value)
- Monitoring well MW4
    - Arsenic – 24µg/L.

Further to exceedances of the adopted trigger values of TRH F2 and naphthalene in monitoring well MW2, the TRH F2 and naphthalene concentrations also exceeded their respective solubility limits. Hence, it is considered likely that NAPL could form or be present in the vicinity of MW2.

10 DISCUSSION

The site is situated on the side of a broad ridge and slopes away to the northeast.

The eastern and southern portions of site, previously used and car and truck parking, had been filled overtime. Most of the fill appears to be predominantly crushed rock or quarried gravels with lesser amounts of sands, silts and clay. No significant contamination impacts were detected within the imported fill.

The former service station was constructed on area that appears to be an igneous rock outcrop that drops off under the service station building. The underground tank farm appears to have been largely placed in the igneous outcrop. Significant groundwater hydrocarbon contamination was detected in the monitor wells. This included the observation of NAPL in test pit TP5 and the detection of significant concentrations of TRH and PAH in monitoring wells MW2 and MW3.

At this stage, it is assumed the groundwater impact is contained in a perched aquifer in the igneous rock outcrop. Provided the outcrop is not fractured the risk of impact of the regional aquifer is considered low.

11 GUIDELINES ON THE DUTY TO REPORT CONTAMINATION

The NSW EPA's *Guidelines on the* (September 2015) explain when contamination should be reported to the EPA based on the levels of contaminants in the land and other related factors. These guidelines also describe situations not intended to be captured by the duty to report.

Section 2.3.5 f the duty to report guidelines state – "If separate-phase contamination of groundwater (i.e. immiscible organic liquid) is found, the EPA is required to be notified regardless of the concentration in the groundwater, unless the situation falls under one of the scenarios described in Section 2.6.3 of these guidelines".

Separate phase contamination of groundwater (referred to as NAPL in this DCA) was observed in in test pit TP5 and was considered likely to be present in the vicinity of monitoring well MW2.

JME considers that Example 7 in Section 2.6.3 of the duty to report guidelines was considered similar to the site scenario:

Example 7

- The site is currently used for industrial purposes. (JME: site is closed)
- There are aboveground and underground storage systems at the site. (JME: underground storage systems present)
- A detailed site investigation has been conducted and the nature, degree and extent of contamination have been thoroughly defined. (JME: the site is currently under investigation and remediation is proposed)
- Contamination is present in the groundwater at concentrations above the triggers but is confined within the boundaries of the site. (JME: impacted groundwater contained in rock outcrop)
- There are phase separated hydrocarbons (PSH) present on the site. (JME: test pit TP5 and monitoring well MW2)
- Site investigations have confirmed that, because the soils are of low permeability, the contaminated groundwater is unlikely to move off site. (JME: Even if the rock outcrop is fractured the permeability is still quite low)
- Groundwater monitoring close to, or at, the hydraulic down-gradient site boundary continues to confirm that the contaminated groundwater will not migrate off site. (JME: no contamination detected in down gradient groundwater well MW4)
- The contaminants have been found not to pose on-site risks (for example, from vapour inhalation).(JME contamination is below vapour intrusion risks)
- An appropriate WH&S plan and EMP are being implemented for site users and visiting maintenance workers. (JME this need to be developed)
- **No duty to report.**

12 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) has been prepared for the site, with reference to the NEPM Schedule B2, Guideline on Site Characterisation. The CSM identifies potential contaminant sources and COCs, contaminant release mechanisms, exposure pathways and potential receptors. The CSM is summarised in Table 9 (below).

12.1 Site History Summary

Historical titles indicate the site was subdivided from a larger parcel of land in 1963 and was leased by service station operators from 1964. Historical aerial photography indicated the site was cleared of vegetation including grass prior to 1967 and was being used a service station with a managers residence located to the west of the service station building. Dangerous goods records and Council records indicate that the site was used a service station until 2005. The site was used as restaurant from 2005 until 2015. The site was approved for landfilling in 2000. Based on information gained from the field observations, sampling and analysis, JME considers that the material used for filling the site does not pose a significant risk to human health or the environment.

The groundwater in the area surrounding the underground tank storage systems has been impacted by petroleum hydrocarbons.

12.2 Source Zone Characteristics

12.2.1 Primary Contaminant Sources

JME considered potential sources of impact on the site to include underground petroleum systems

12.2.2 Identified Contaminants of Concern

Based on the results of this assessment, COCs on the site were considered to include TRH and PAH.

12.3 Areas of Environmental Concern

AECs on the site were considered to include the forecourt area of the service station.

12.4 Contaminant Transport Mechanisms

Primary transport mechanisms on the site were considered to include percolation of stormwater into groundwater, and groundwater migration.

12.5 Contaminant Exposure Pathways

For contaminated soil to pose a risk to a receptor, a complete exposure pathway must exist between the source of impact and the receptor. A complete exposure pathway consists of the following elements:

- A source and mechanism for release;
- A storage and/or transport medium (e.g. contaminants stored in fine soil types and transported into the atmosphere as dust);
- An exposure point, where the receptor comes in contact with the contamination; and
- An exposure route (e.g. inhalation).

Potential exposure pathways on the site were considered to include:

- Metabolisation by the local ecology;
- Dermal contact, incidental ingestion of groundwater by sub surface workers on the site and neighbouring premises; and
- Vapour intrusion and inhalation by staff and site users of the service station building.

12.6 Identification of Receptors at Risk

Potential receptors were considered to include:

- Site users
- Local ecology;
- Groundwater; and
- Down-gradient surface water ecology and users.

TABLE 9: CONCEPTUAL SITE MODEL 254 Tarean Road, Karuah

Known and Potential Primary Sources	Contaminants of Concern	Impacted Media	Transport Mechanism	Exposure Pathways	Potential Receptors
Underground petroleum storage systems	PAH and TRH	Groundwater and potentially soil vapour	Groundwater migration	Incidental ingestion. Inhalation Dermal contact Plant uptake and ingestion by freshwater ecology	Site users/visitors Local Ecology

13 CONCLUSION AND RECOMMENDATIONS

Based on the results of this and the previous assessment, it was considered that the site had been impacted by groundwater contamination comprising TRH and PAH at concentrations exceeding the adopted site trigger values for commercial/ industrial land use and the presence of NAPL in the groundwater.

Groundwater in the forecourt area of site was impacted with TRH and PAH. Remediation of the groundwater including the following is recommended:

- Delineation of the groundwater contamination plume.
- Removal of underground petroleum storage systems infrastructure.
- Remediation of impacted soils and groundwater from the UPSS voids.

These actions should be undertaken with guidance of a Remediation Action Plan that is prepared and implemented by suitably certified, qualified and experienced person.

REFERENCES

CRC CARE Technical Report No. 39 'Risk-based management and remediation guidance for benzo(a)pyrene'

National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (amended 2013) Schedule B1, Guideline on Investigation Levels for Soil and Groundwater

National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (amended 2013) Schedule B2, Guideline on Site Characterisation

National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (amended 2013) Schedule B3, Guideline on Laboratory Analysis of Potentially Contaminated Soils

National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (amended 2013) Schedule B5c, Guideline on Ecological Investigation Level for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel & Zinc

NSW Contaminated Land Management Act 1997

NSW Department of Environment and Conservation (2006) Guidelines for the NSW Site Auditor Scheme 2nd edition

NSW Department of Mineral Resources (1966) Newcastle 1:250,000 Geological Sheet (SI/56-02)

NSW Environment Protection Authority (2022) Sampling Design Guidelines

NSW Environment Protection Authority (2017) Guidelines for the NSW Site Auditor Scheme 3rd Edition

NSW Office of Environment and Heritage (2011) Guidelines for Consultants Reporting on Contaminated Sites

NSW Protection of the Environment Operations Act 1997

Google Earth

www.maps.six.nsw.gov.au

NSW Department of Planning, Industry and Environment –"eSPADE NSW Soil and Land Information" online service

Lake Macquarie Local Environmental Plan

realtimedata.waternsw.com.au/water.stm

LIMITATIONS

This report was prepared for the [redacted] with the objective of assessing the presence of potential contamination on the site that could impact on the future development of the site. The report is not intended for other parties or other uses. No warranty, expressed or implied, is made as to the information and professional advice included in this report. Anyone using this document does so at their own risk and should satisfy themselves concerning its applicability and, where necessary, should seek expert advice in relation to the particular situation at the time.

In preparing this report, current guidelines for the assessment and management of contaminated land were followed. This work has been conducted in good faith, in accordance with JME's understanding of the client's brief, and general accepted practice for environmental consulting. The findings within this report are the result of discrete/specific sampling practices used in accordance with normal practices and standards. To the best of JME's knowledge, they represent a reasonable interpretation of the general conditions of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points. It is the nature of contaminated site investigations that the degree of variability in site conditions cannot be known completely, and no sampling and analysis program can eliminate all uncertainty concerning the condition of the site. Professional judgement must be exercised in the collection and interpretation of data.

This report does not contain geotechnical information and should not be used for geotechnical purposes.

Summary Tables

Laboratory Summary Table 1

BTEX, TRH, PAH and Heavy Metals

35 and 45 Pacific Highway Bennetts Green

Analyte Name	Units	HIL	EIL	ESL	Manage-ment Limit	Description	SP1-1	SP1-2	SP1-3	TP1-0	TP1-0.4	TP1-0.6	TP2-0	TP2-0.6	TP5-0	TP5-1	TP6-0	TP6-1
						Sample Date	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023
						Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						Reporting Limit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	mg/kg			95		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg			135		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg			185		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes	mg/kg			95		0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH C6-C10 (F1)	mg/kg			215	800	25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**84**	<25	<25
TRH >C10-C16 (F2)	mg/kg			170	1000	25	<25	**40**	<25	<25	<25	<25	<25	<25	**26**	**1100**	<25	<25
TRH >C16-C34 (F3)	mg/kg			2500	5000	90	<90	**100**	<90	<90	<90	<90	<90	<90	**140**	**740**	<90	<90
TRH >C34-C40 (F4)	mg/kg			6600	10000	120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120
Naphthalene	mg/kg		370			0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Benzo(a)pyrene	mg/kg			172		0.1	**0.1**	**0.2**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BaP TEQ	mg/kg	40				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
Total PAH	mg/kg	4000				0.8	<0.8	**1.0**	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	**4.6**	<0.8	<0.8
pH	pH Units					0.1	**6.9**	-	-	-	**6.7**	-	-	-	-	**9.2**	-	-
CEC	meq/100g					0.02	**13**	-	-	-	**6.7**	-	-	-	-	**13**	-	-
Arsenic, As	mg/kg	3000	160			1	**4**	**3**	**3**	**5**	**15**	**23**	**2**	**12**	<1	**3**	**3**	**3**
Cadmium, Cd	mg/kg	900	3			0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	3600	670			0.5	**7.9**	**8.0**	**6.5**	**1.4**	**33**	**41**	<0.5	**31**	**0.7**	**4.0**	**1.7**	**1.9**
Copper, Cu	mg/kg	240000	70			0.5	**9.1**	**7.4**	**8.8**	**1.1**	**7.5**	**3.1**	<0.5	**11**	**1.7**	**6.1**	**1.3**	**1.5**
Lead, Pb	mg/kg	1500	1800			1	**12**	**12**	**12**	**38**	**27**	**24**	**2**	**57**	**7**	**12**	**10**	**11**
Nickel, Ni	mg/kg	6000	10			0.5	**3.9**	**3.3**	**3.1**	<0.5	**4.5**	**3.0**	<0.5	**4.7**	<0.5	**1.1**	**1.3**	**1.0**
Zinc, Zn	mg/kg	400000	250			2	**67**	**70**	**68**	**15**	**39**	**24**	<2	**64**	**14**	**37**	**20**	**24**
Mercury	mg/kg	730	1			0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

5300 Exceeds adopted trigger value by >250%

500 Exceeds adopted trigger value by <250%

Analyte Name	Units	HIL	EIL	ESL	Manage-ment Limit	Description	TP7-0	TP8-0	TP10-0	TP10-0.4	TP12-0	TP13-0	TP14-0	TP15-0	TP16-0	TP17-0	TP17-1.6	TP18-0
						Sample Date	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023
						Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						Reporting Limit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Benzene	mg/kg			95		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg			135		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg			185		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes	mg/kg			95		0.2	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH C6-C10 (F1)	mg/kg			215	800	25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2)	mg/kg			170	1000	25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**61**	<25
TRH >C16-C34 (F3)	mg/kg			2500	5000	90	<90	<90	**300**	<90	<90	<90	<90	<90	<90	<90	**250**	<90
TRH >C34-C40 (F4)	mg/kg			6600	10000	120	<120	<120	**420**	<120	<120	<120	<120	<120	<120	<120	<120	<120
Naphthalene	mg/kg		370			0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg			172		0.1	<0.1	<0.1	**1.1**	<0.1	<0.1	**1.2**	**0.4**	**0.1**	<0.1	<0.1	**0.2**	<0.1
BaP TEQ	mg/kg	40				0.2	<0.2	<0.2	**1.6**	<0.2	<0.2	**1.8**	**0.5**	<0.2	<0.2	<0.2	**0.3**	<0.2
Total PAH	mg/kg	4000				0.8	<0.8	<0.8	**6.7**	<0.8	<0.8	**12**	**3.6**	**0.8**	<0.8	<0.8	**2.4**	<0.8
pH	pH Units					0.1	-	-	-	-	-	-	-	-	**5.8**	**6.9**	-	-
CEC	meq/100g					0.02	-	-	-	-	-	-	-	-	**2.0**	**4.4**	-	-
Arsenic, As	mg/kg	3000	160			1	**3**	**4**	**26**	**2**	**3**	**4**	**3**	**3**	**3**	**2**	**8**	**2**
Cadmium, Cd	mg/kg	900	3			0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.5**	<0.3
Chromium, Cr	mg/kg	3600	670			0.5	**1.9**	**19**	**93**	**24**	**1.0**	**6.4**	**5.8**	**31**	**3.2**	**1.1**	**8.2**	**4.7**
Copper, Cu	mg/kg	240000	70			0.5	**1.4**	**38**	**11**	**7.2**	**0.7**	**10**	**10**	**9.8**	**4.9**	**0.6**	**26**	**5.5**
Lead, Pb	mg/kg	1500	1800			1	**11**	**35**	**44**	**10**	**9**	**75**	**92**	**29**	**20**	**12**	**110**	**6**
Nickel, Ni	mg/kg	6000	10			0.5	**3.0**	**22**	**3.1**	**4.6**	**0.5**	**2.4**	**2.4**	**4.1**	**2.3**	**0.8**	**7.3**	**2.5**
Zinc, Zn	mg/kg	400000	250			2	**25**	**72**	**29**	**32**	**17**	**45**	**39**	**86**	**69**	**22**	**140**	**22**
Mercury	mg/kg	730	1			0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.06**	<0.05

Laboratory Summary Table 1

BTEX, TRH, PAH and Heavy Metals

35 and 45 Pacific Highway Bennetts Green

Analyte Name	Units	HIL	EIL	ESL	Manage-ment Limit	Description	TP18-0.4	TP19-0	TP20-0	TP21-0	TP22-0	TP22-0.5	TP23-0	TP24-0	TP25-0	TP26-0	TP27-0
						Sample Date	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023
						Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
						Reporting Limit	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Benzene	mg/kg			95		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg			135		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg			185		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes	mg/kg			95		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TRH C6-C10 (F1)	mg/kg			215	800	25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2)	mg/kg			170	1000	25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg			2500	5000	90	<90	<90	<90	<90	**150**	<90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg			6600	10000	120	<120	<120	<120	<120	**150**	<120	<120	<120	<120	<120	<120
Naphthalene	mg/kg		370			0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg			172		0.1	<0.1	<0.1	<0.1	<0.1	**1.3**	<0.1	<0.1	<0.1	**0.2**	**0.3**	**0.2**
BaP TEQ	mg/kg	40				0.2	<0.2	<0.2	<0.2	<0.2	**1.8**	<0.2	<0.2	<0.2	**0.3**	**0.4**	**0.3**
Total PAH	mg/kg	4000				0.8	<0.8	<0.8	<0.8	<0.8	**13**	<0.8	<0.8	<0.8	**2.1**	**2.2**	**2.7**
pH	pH Units					0.1	-	-	-	-	-	-	-	**7.5**	-	-	-
CEC	meq/100g					0.02	-	-	-	-	-	-	-	**5.9**	-	-	-
Arsenic, As	mg/kg	3000	160			1	**3**	**3**	**3**	**5**	**3**	**5**	**3**	**1**	**4**	**5**	**4**
Cadmium, Cd	mg/kg	900	3			0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	3600	670			0.5	**1.9**	**4.9**	**10**	**11**	**6.8**	**32**	**8.7**	**6.5**	**19**	**8.0**	**7.4**
Copper, Cu	mg/kg	240000	70			0.5	**1.6**	**5.4**	**10**	**7.4**	**5.9**	**1.9**	**9.1**	**9.6**	**13**	**8.3**	**4.8**
Lead, Pb	mg/kg	1500	1800			1	**13**	**15**	**12**	**15**	**31**	**21**	**9**	**5**	**16**	**30**	**15**
Nickel, Ni	mg/kg	6000	10			0.5	**1.5**	**3.0**	**5.6**	**7.1**	**3.0**	**7.5**	**7.0**	**6.6**	**8.7**	**4.3**	**3.8**
Zinc, Zn	mg/kg	400000	250			2	**19**	**25**	**42**	**49**	**44**	**17**	**28**	**27**	**51**	**57**	**29**
Mercury	mg/kg	730	1			0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

5300	Exceeds adopted trigger value by >250%
500	Exceeds adopted trigger value by <250%

Laboratory Summary Table 2

Volatile Chlorinated Hydrocarbon

254 Tarean Road, Karuah

	Description	TP1-0.4	TP2-0	TP2-0.6	TP5-1	TP6-0	TP16-0	TP17-0	TP7-1.6	TP23-0	TP24-0
	Sample Date	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023	7/11/2023
	Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Analyte Name	**Units**	**Reporting Limit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Total VOC	mg/kg	24	<24	<24	<24	<24	<24	<24	<24	<24	<24
Total Volatile Chlorinated Hydrocarbons	mg/kg	3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Total Chlorinated Hydrocarbons VIC EPA	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8

Laboratory Summary Table 3

Organochloride Pesticides and Polychlorinated Biphenyls

254 Tarean Road, Karuah

			Description	TP9-1	TP14-1	TP26-2	TP33-1	TP34-1
			Sample Date	11/10/2022	11/10/2022	12/10/2022	13/10/2022	13/10/2022
			Matrix	Soil	Soil	Soil	Soil	Soil
Analyte Name	**Units**	**HIL**	**Reporting Limit**	**Result**	**Result**	**Result**	**Result**	**Result**
Hexachlorobenzene	mg/kg	80	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	50	0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Aldrin and Dieldrin	mg/kg	45	0.1	<0.2	<0.2	<0.2	<0.2	<0.2
DDT+DDE+DDD	mg/kg	3600	0.1	<0.6	<0.6	<0.6	<0.6	<0.6
Endosulfan	mg/kg	2000	0.2	<0.3	<0.3	<0.3	<0.3	<0.3
Chlordane	mg/kg	530	0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	100	0.2	<0.3	<0.3	<0.3	<0.3	<0.3
Methoxychlor	mg/kg	2500	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	100	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DDT	mg/kg	640	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PCBs (Arochlors)	mg/kg	7	1	<1	<1	<1	<1	<1

Laboratory Summary Table 4

Groundwater BTEX, TRH, PAH and Heavy Metals

254 Tarean Road, Karuah

Analyte Name	Units	ANZG	HSL Vapour Intrusion	Description	MW2	MW3	MW4	QC1	Relative
				Sample Date	15/12/2023	15/12/2023	15/12/2023	15/12/2023	Percentage
				Matrix	Soil	Soil	Soil	Soil	Difference
				Reporting Limit	Result	Result	Result	Result	Result
Benzene	µg/L	950	5000 (59,000)	0.1	**13**	**0.5**	<0.5	<0.5	0%
Toluene	µg/L	180	(61000)	0.1	<5	<0.5	<0.5	<0.5	0%
Ethylbenzene	µg/L	80	(3900)	0.1	<5	<0.5	<0.5	<0.5	0%
m/p -xylene	µg/L	75	(21000)		<10	<1	<1	<1	0%
o-*xylene*	µg/L	350	(21000)	*0.3*	*<5*	**5.8**	<0.5	<0.5	*0%*
TRH C6-C10 (F1)	µg/L	-	6000 (9000)	25	**4200**	**83**	<50	<50	0%
TRH >C10-C16 (F2)	µg/L	-	(3000)	25	**14000**	**1400**	<60	<60	0%
TRH >C16-C34 (F3)	µg/L	-	-	90	**8500**	**1400**	<500	<500	0%
TRH >C34-C40 (F4)	µg/L	-	-	120	<500	<500	<500	<500	0%
Anthracene	µg/L	0.01	-	0.1	**2.1**	<0.1	<0.1	<0.1	0%
Benzo(a)pyrene	µg/L	0.1	-	0.1	<0.1	<0.1	<0.1	<0.1	0%
Fluoranthene	µg/L	1.0	-	0.1	**1.7**	**0.1**	<0.1	<0.1	0%
Naphthalene	µg/L	16	(170)	0.1	**250**	**28**	<0.1	<0.1	0%
Phenanthrene	µg/L	0.6	-	0.1	**45**	**1.9**	<0.1	<0.1	0%
Arsenic, As	µg/L	13	-	1	**6**	**15**	**24**	**24**	0%
Cadmium, Cd	µg/L	0.2	-	0.3	<0.1	<0.1	<0.1	<0.1	0%
Chromium, Cr	µg/L	1	-	0.5	<1	<1	<1	<1	0%
Copper, Cu	µg/L	1.4	-	0.5	**1**	**3**	**1**	**1**	0%
Lead, Pb	µg/L	3.4	-	1	<1	<1	<1	<1	0%
Nickel, Ni	µg/L	11	-	0.5	**3**	**6**	**1**	**1**	0%
Zinc, Zn	µg/L	8	-	2	**27**	<5	<5	**17**	200%
Mercury	µg/L	0.06	-	0.05	<0.0001	<0.0001	<0.0001	<0.0001	0%

5300
500

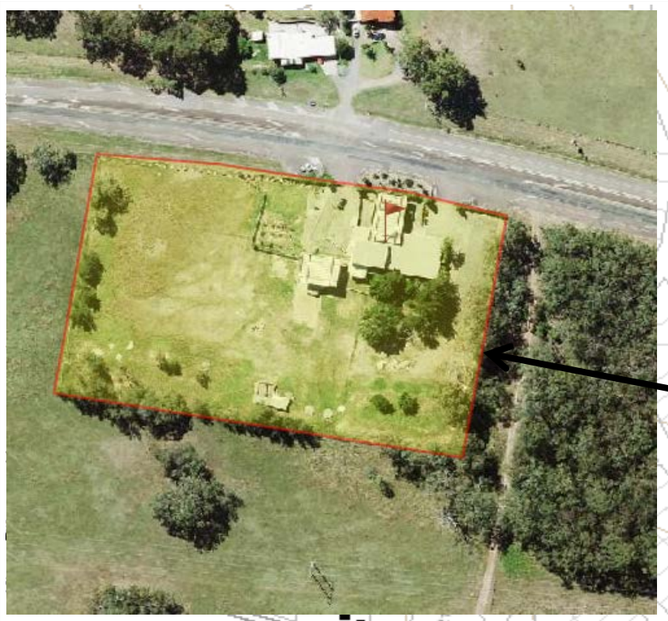
Laboratory Summary Table 5

Soil QA/QC Result

254 Tarean Road, Karuah

	Description	TP26-0	QC1	Relative	SP1-1	QC2	Relative	Trip Blank	Trip Spike
	Sample Date	7/11/2023	7/11/2023	Percentage	7/11/2023	7/11/2023	Percentage	7/11/2023	7/11/2023
	Matrix	Soil	Soil	Difference	Soil	Soil	Difference	Soil	Soil
Analyte Name	**Units**	**Reporting Limit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Benzene	mg/kg	HIL	<0.1	<0.1	0%	<0.1	<0.1	0%	<0.1	[118%]
Toluene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	<0.1	0%	<0.1	[114%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	<0.1	0%	<0.1	[106%]
Total Xylenes	mg/kg	0.3	<0.2	<0.3	0%	<0.3	<0.3	0%	<0.3	[104%]
TRH C6-C10 minus B	mg/kg	25	<25	<25	0%	<25	<25	0%		
TRH >C10-C16	mg/kg	25	<25	<25	0%	<25	<25	0%		
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	0%	<90	<90	0%		
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	0%	<120	<120	0%		
Naphthalene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	<0.1	0%		
Benzo(a)pyrene	mg/kg	0.1	**0.3**	0.2	0%	**0.1**	<0.1	0%		
Carcinogenic PAHs, B	TEQ (mg	0.3	**0.4**	0.5	0%	<0.2	<0.2	0%		
Total PAH (NEPM/WI	mg/kg	0.8	**2.2**	3.7	0%	<0.8	<0.8	0%		
Arsenic, As	mg/kg	1	**5**	**5**	0%	**4**	**3**	14%		
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0%	<0.3	<0.3	0%		
Chromium, Cr	mg/kg	0.5	**8**	**9**	100%	**7.9**	**6.0**	14%		
Copper, Cu	mg/kg	0.5	**8**	**2**	100%	**9.1**	**8.7**	2%		
Lead, Pb	mg/kg	1	**30**	**20**	100%	**12**	**12**	0%		
Nickel, Ni	mg/kg	0.5	**4.3**	**1**	100%	**3.9**	**2.8**	16%		
Zinc, Zn	mg/kg	2	**57**	**18**	100%	**67**	**67**	0%		
Mercury	mg/kg	0.05	<0.05	<0.05	0%	<0.05	<0.05	0%		

Figures



Site

ROAD

TAREAN ROAD

MUSTONS ROAD

GEORGE STREET

PEACHEY CIRCUIT

Cemetery

RFS

254

212

264

290

229

339

22

24

ENVIRONMENTS

[redacted]

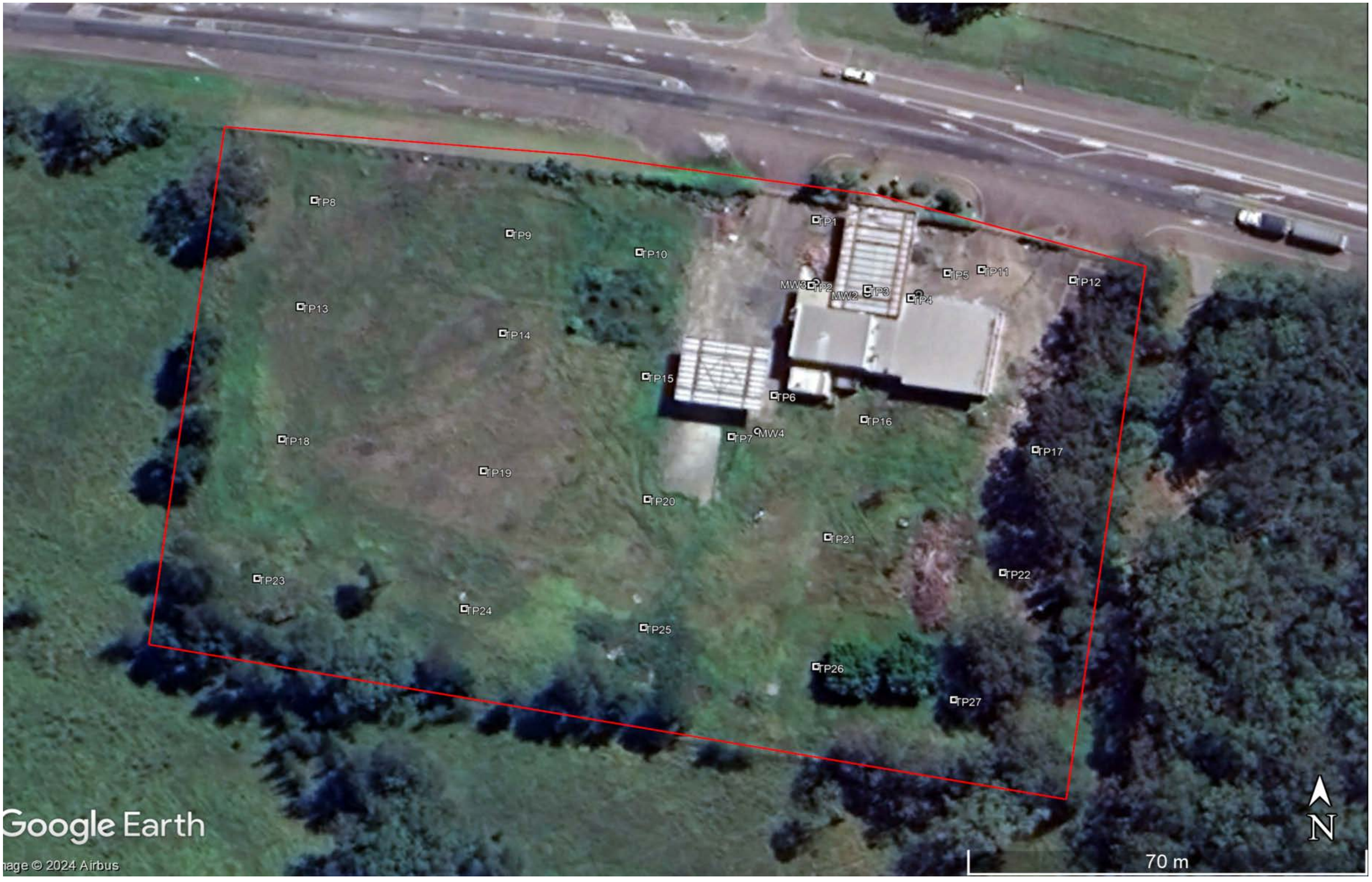
PROJECT TITLE: **254 Tarean Road Karuah**

PROJECT:	JME21073	DESIGNED:	JMc	
DWG #:	1	DRAWN:	JMc	
REVISION:	1	STATUS:	NFC	
SCALE:	As shown			
DATE:	4/11/2021			

FIGURE TITLE:

Site Location Plan

FIGURE NUMBER: **1**



ENVIRONMENTS

[redacted]

PROJECT TITLE: **254 Tarean Road Karuah**

PROJECT:	JME21073	DESIGNED:	JMc	
DWG #:	1	DRAWN:	JMc	
REVISION:	1	STATUS:	NFC	
SCALE:	As shown			
DATE:	4/11/2021			

FIGURE TITLE:
Sampling Location Plan

FIGURE NUMBER: **2**

Appendix A

Test Pit and Borehole Logs

TEST PIT LOG TP1

PROJECT No:

DATE: 9/11/2023

LONGITUDE: 151.947105

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652532

CLIENT: [redacted]

TOTAL DEPTH: 1.1

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				CONCRETE
		Fill: clayey SAND red/brown	nil		TP1-0	FILL
		FILL: sitly CLAY high pasticity grey/brown with some angular gravel				FILL
					TP1-0.4	
		FILL: silty GRAVEL				FIILL
					TP1-0.6	
1		CLAY: high plasticity olive brown				RESIDUAL
		SANDSTONE medium grained purple				VERY HARD, EOH
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater:

Static Groundwater Level:

	Reviewed By:	FILE

TEST PIT LOG TP2

PROJECT No:

DATE: 9/11/2023

LONGITUDE: 151.947078

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652643

CLIENT: [redacted]

TOTAL DEPTH: 0.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		Concrete				CONCRETE
		FILL: clayey SAND medium grained olive and brown			TP2-0	FILL
		FILL: silty CLAY low plasticity brown	slight HC odour		TP2-0.6	FIILL
		gravelly CLAY high plasticity olive and grey			TP2-0.8	RESIDUAL
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: not encountered

Static Groundwater Level:

Reviewed By:

FILE

TEST PIT LOG TP6

PROJECT No:

DATE: 9/11/2023

LONGITUDE: 151.947027

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652829

CLIENT: [redacted]

TOTAL DEPTH: 1.1

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				CONCRETE
		FILL:sandy GRAVEL fine grained brown	no odour		TP5-0	FILL: tank backfill sand?
1					TP5-1	
						EOH on PVC stormwater pipes
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 1m

Static Groundwater Level: 1m

Reviewed By:

FILE

TEST PIT LOG TP5

PROJECT No:

DATE: 9/11/2023

LONGITUDE: 151.947359

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652614

CLIENT: [redacted]

TOTAL DEPTH: 1.1

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				**CONCRETE**
		FILL: SAND medium grained grey			**TP5-0**	**FILL**
		FILL: gravelly CLAY low plasticity brown	**HC odour**			**FIILL**
		ROCK; aqua	**strong HC odour**			**IGNEOUS ROCK. Very very hard. Excavated with aid of pneumatic hammer.**
1					**TP5-1**	**Free phase NAPL droplets with groundwater inflow.**
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 1m

Static Groundwater Level: 1m

	Reviewed By:	**FILE**

TEST PIT LOG TP7

SHEET 1 of 1

PROJECT No:
DATE: 8/11/2023
LONGITUDE: 151.946947
SITE: 254 Tarean Road Karuah
LOGGED BY: JMc
LATITUDE: -32.652899
CLIENT: [redacted]
TOTAL DEPTH: 2.2

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				**CONCRETE**
		FILL:sandy GRAVEL fine grained brown	**no odour**			
1		FILL: SAND medium grained yellow				**FILL: Builders sand?**
		RESIDUAL:: silty SAND brown fine grained			**TP7-1**	**RESIDUAL?**
		ROCK aqua			**TP7-1.6**	**IGNEOUS ROCK very very hard. excavates as angular gravel/cobbles**
2						**EOH on PVC stormwater pipes**
						EOH

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 1m

Static Groundwater Level: 1m

	Reviewed By:	**FILE**

TEST PIT LOG TP8

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.946168

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652499

CLIENT: [redacted]

TOTAL DEPTH: 0.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: sandy clayey COBBLES angular dark grey, brown sand/clay	no odour		TP8-1	FILL
		RESIDUAL: CLAY high plasticity olive/grey				RESIDIUAL
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 1m

Static Groundwater Level: 1m

Reviewed By:

FILE

TEST PIT LOG TP9

PROJECT No:
DATE: 7/11/2023
LONGITUDE: 151.946533
SITE: 254 Tarean Road Karuah
LOGGED BY: JMc
LATITUDE: -32.652555
CLIENT: [redacted]
TOTAL DEPTH: 1.2

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: gravelly SAND medium grained brown			TP9-0	FILL
		FILL: crushed purple rock.				
		FILL: clayey SAND fine grained grey and brown	no odour		TP9-0.5	FILL
1		FILL: sandy COBBLES angular grey				FILL
						Refusal
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By: **FILE**

TEST PIT LOG TP10

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.946775

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652587

CLIENT: [redacted]

TOTAL DEPTH: 0.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: silty SAND medium grained brown			TP10-0	FILL
		FILL: crushed orange and brown rock.				FILL
		FILL: silty SAND fine grained brwon with some gravel	no odour		TP10-0.4	FILL
		RESIDUAL: CLAY medium plasticity olive/brown with some angular gravel			TP10-0.8	RESIDUAL
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP12

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.947585

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652634

CLIENT: [redacted]

TOTAL DEPTH: 0.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				CONCRETE
		FILL: sandy GRAVEL fine grained brown			TP12-0	FILL
		FILL: silty SAND fine grained brown with some gravel	no odour		TP12-0.5	FILL/TOPSOIL?
		RESIDUAL: CLAY medium plasticity olive/brown with some large angular gravel			TP12-0.7	RESIDUAL
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP13

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.946142

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652679

CLIENT: [redacted]

TOTAL DEPTH: 1.4

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		FILL: sandy CLAY low plasticity brown	no odour		TP13-0	FILL
		FILL: cruished purple sandstone			TP13-1	FILL
1		sandy SILT brown				FILL/TOPSOIL?
		Gravelly CLAY: high plasticity grey				RESIDUAL
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP14

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.94652

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652724

CLIENT: [redacted]

TOTAL DEPTH: 1.2

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		FILL: gravelly sand medium grained brown			TP14-0	FILL
		FILL: cruished purple sandstone	no odour			FILL
		Silty sands, sand-silt mixtures.				FILL/TOPSOIL?
		CLAY medium pl;asticity olive and grey				RESIDUAL
1		GRAVELS and COBBLES angular grey				Fractured rock?
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP15

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.946787

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652797

CLIENT: [redacted]

TOTAL DEPTH: 1.3

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: sandy GRAVEL			TP15-0	FILL
		FILL: crushed rock with sand and gravel brown	no odour			FILL
					TP15-0.6	
		CLAY medium pl;asticity grey blue				RESIDUAL
1		GRAVELS and COBBLES angular grey				Fractured rock?
					TP15-1.2	
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

	Reviewed By:	FILE

TEST PIT LOG TP16

SHEET 1 of 1

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.947195

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.65287

CLIENT: [redacted]

TOTAL DEPTH: 0.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: gravelly SAND medium grained brown			TP16-0	FILL
		FILL: gravelly CLAY low plasticity/calyet GRAQVEL yellow	no odour		TP16-0.3	FILL
		CLAY high plasticity brown with some angular gravel				RESIDUAL
		SANDSTONE medium grained purple				Sandstone? Hard
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

	Reviewed By:	FILE

TEST PIT LOG TP17

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.947515

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652921

CLIENT: [redacted]

TOTAL DEPTH: 1.6

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				CONCRETE
		FILL: sandy GRAVEL fine grained brown			TP17-0	FILL
		FILL: sandy GRAVEL/COBBLE brown	no odour			FILL-locally won?
		FILL: sandy GRAVEL fine grained black				FILL with some metal pipe, glass and grass clippings
1					TP17-1	
		gravelly sandy CLAY low plasticity grey				
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP18

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.94609

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652903

CLIENT: [redacted]

TOTAL DEPTH: 0.8

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: Road base blue stone with orange silty sand	no odour		TP18-0	FILL
		FILL: gravelly SAND medium grained light brown			TP18-0.4	FILL
		SANDSTONE medium grained purple				ROCK
1						
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

	Reviewed By:	FILE

TEST PIT LOG TP19

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.946484

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.652957

CLIENT: [redacted]

TOTAL DEPTH: 1.5

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL: Road base blue stone with orange silty sand				FILL
		FILL: crushed rock orange	no odour		TP19-0	FILL
		sandy gravelly SILT brown			TP19-0.5	TOPSOIL/FILL? with metal, magnum wrapper, plastic soft drink bottles, fanbelts, bricks
1		CLAY high plasticity grey/olive				RESIDUAL
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP20

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.94679

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653005

CLIENT: [redacted]

TOTAL DEPTH: 1.2

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		FILL: Road base blue stone with grey silty sand			TP20-0	FILL
		FILL: sandy CLAY and clayey SAND grey/brown	no odour		TP20-0.7	FILL with some brick and frament of asbestos containing material
		CLAY high plasticity grey/blue			TP20-0.9	RESIDUAL
1		GRAVEL/COBBLES angular grey/blue			TP20-1.2	Fractured rock?
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP21

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.947127

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653069

CLIENT: [redacted]

TOTAL DEPTH: 1.1

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		FILL:sandy GRAVEL fine grained brown			TP21-0	FILL
		FILL: clayey GRAVEL angular blue/brown				FILL
		FILL: silty gravelly SAND brown/grey	no odour		TP21-0.6	
		FILL:clayey gravel orange brown				FILL
1		GRAVEL/COBBLES grey				Fractured rock?
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP22

PROJECT No:

DATE: 8/11/2023

LONGITUDE: 151.947454

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653129

CLIENT: [redacted]

TOTAL DEPTH: 1.5

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		Concrete				CONCRETE low strength
		FILL: gravelly SAND fine-medium grained brown			TP22-0	FILL
		FILL: gravelly SAND brown and sandy GRAVEL grey	no odour		TP22-0.5	FILL
1		gravelly CLAY medium to high plasticity purple/grey			TP22-1.2	RESIDUAL?
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

	Reviewed By:	FILE

TEST PIT LOG TP23

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.946061

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653139

CLIENT: [redacted]

TOTAL DEPTH: 1.2

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL sandy GRAVEL grey			TP23-0	FILL: Road base
		FILL:gravelly sandy CLAY light brown	no odour		TP23-0.5	FILL
1		CLAY medium-high plasticity olive and brown				RESIDUAL
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

TEST PIT LOG TP24

SHEET 1 of 1

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.946448

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.65319

CLIENT: [redacted]

TOTAL DEPTH: 1.9

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL sandy GRAVEL grey			TP24-0	FILL: Road base
		FILL:clayey SAND with some gravel brown	no odour			FILL
1		Asphalt			TP24-1.1	Former pavement?
		FILL:clayey SAND with some gravel brown				FILL with some bricks
		gravelly CLAY medium plasticity olive and orange with some red mottle				RESIDUAL
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

	Reviewed By:	FILE

TEST PIT LOG TP25

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.946783

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653222

CLIENT: [redacted]

TOTAL DEPTH: 1.4

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
		~~Ground Surface~~				
0		FILL silty SAND brown			TP25-0	FILL
		FILL:silty sandy CLAY low plasticity brown	no odour		TP25-0.5	FILL Free flowing water from west side of the test pit
1		GRAVEL/COBBLES grey				Fractured rock?
		SANDSTONE fine grained dark blue/grey				ROCK
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 0.8m

Static Groundwater Level: testpit backfilled

Reviewed By:

FILE

TEST PIT LOG TP26

SHEET 1 of 1

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.947105

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653288

CLIENT: [redacted]

TOTAL DEPTH: 1.1

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL silty SAND medium grained dark grey			TP26-0, QC1, QC1A	FILL
		FILL:gravelly CLAY medium plasticity orange and grey	no odour		TP26-1	FILL
1						Free flowing water from west side of the test pit
2						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: 0.8m

Static Groundwater Level: testpit backfilled

Reviewed By:

FILE

TEST PIT LOG TP27

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.947403

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653331

CLIENT: [redacted]

TOTAL DEPTH: 2.6

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
0		~~Ground Surface~~				
		FILL gravelly CLAY low plasticity orangey brown, angular gravel with some angukar cobbles	no odour		TP27-0	FILL
1						
2		gravelly CLAY high plasticity olive/grey			TP27-2.5	RESIDUAL

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

ENVIRONMENTS

TEST PIT LOG TP27

PROJECT No:

DATE: 7/11/2023

LONGITUDE: 151.947403

SITE: 254 Tarean Road Karuah

LOGGED BY: JMc

LATITUDE: -32.653331

CLIENT: [redacted]

TOTAL DEPTH: 2.6

DEPTH (m)	LEGEND	DESCRIPTION	ODOUR	PID (ppmv)	SAMPLE LABEL	COMMENTS
3						
4						

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater: no occurrence

Static Groundwater Level: no occurrence

Reviewed By:

FILE

Appendix B

Laboratory Documentation

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Facsimile No: (02) 85940499
Telephone No: (02) 85940400
Email:
au.samplereceipt.sydney@sgs.com

Sample Date: 7-9/11/2023

Company Name:	JM Environments	Project Name/No:	JME21073
Address:	37 Tooke St	Purchase Order No:	JME21073
	COOKS HILL NSW 2300	Results Required By:	standard
Contact Name:	[redacted]	Telephone:	[redacted]
Telephone	[redacted]	Email:	[redacted]

Reliquinshed by: J McMahon	Date /Time	Received by:	[redacted]	Date /Time	10.11.23 10:25
Reliquinshed by:	Date /Time			Date /Time	
Samples intact: Yes/No	Temperature	14.3 ICE	Sample Cooler Sealed Yes/No	Labortaory Quotation	170719EA

Lab ID	Lab Sample ID	Water	Soil	Other	Preservative	No. of Containers	BTEX/TPH PAH/8HM	8HM	OCP/PCB	Asbestos yes/no	VOC/TPH PAH/8HM	Asbestos Gravimetric	pH/CEC	Speciated phenols	BTEX	Comments
1	SP1-1		X		ICE	1	x						x			
2	SP1-2		X		ICE	1	x		x							
3	SP1-3		X		ICE	1	x									
4	TP1-0		X		ICE	1	x									
5	TP1-0.4		X		ICE	1					x		x	x		
6	TP1-0.6		X		ICE	1	x									
7	TP2-0		X		ICE	1					x			x		
8	TP2-0.6		X		ICE	1					x					
	TP2-0.8		X		ICE	1										
9	TP5-0		X		ICE	1	x									
10	TP5-1		X		ICE	1					x		x	x		
11	TP6-0		X		ICE	1					x					
12	TP6-1		X		ICE	1	x									
13	TP7-0		X		ICE	1	x									
	TP7-1.6		X		ICE	1										
14	TP8-0		X		ICE	1	x									
	TP9-0		X		ICE	1										
	TP9-0.5		X		ICE	1										
15	TP10-0		X		ICE	1	x									
16	TP10-0.4		X		ICE	1	x									

SGS EHS Sydney COC
SE256527

CHAIN OF CUSTODY & ANALYSIS REQUEST

Sample Date: 7-9/11/2023

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Facsimile No: (02) 85940499
Telephone No: (02) 85940400
Email:
au.samplereceipt.sydney@sgs.com

Company Name:	JM Environments	Project Name/No:	JME21073
Address:	37 Tooke St	Purchase Order No:	JME21073
	COOKS HILL NSW 2300	Results Required By:	standard
Contact Name:	[redacted]	Telephone:	[redacted]
Telephone	[redacted]	Email:	[redacted]

Reliquinshed by: J McMahon	Date /Time	Received by:	SGS	Date /Time	
Reliquinshed by:	Date /Time	Received by:		Date /Time	
Samples intact: Yes/No	Temperature	Sample Cooler Sealed Yes/No		Labortaory Quotation	170719EA

Lab ID	Lab Sample ID	Water	Soil	Other	Preservative	No. of Containers	BTEX/TPH PAH/8HM	8HM	OCP/PCB	Asbestos yes/no	VOC/TPH PAH/8HM	Asbestos Gravimetric	pH/CEC	Speciated phenols	BTEX					Comments
	TP10-0.8		X		ICE	1														
17	TP12-0		X		ICE	1	x													
	TP12-0.5		X		ICE	1														
	TP12-0.7		X		ICE	1														
18	TP13-0		X		ICE	1	x													
	TP13-1		X		ICE	1														
19	TP14-0		X		ICE	1	x													
20	TP15-0		X		ICE	1	x													
	TP15-0.6		X		ICE	1														
	TP15-1.2		X		ICE	1														
21	TP16-0		X		ICE	1					x		x	x						
	TP16-0.3		X		ICE	1														
22	TP17-0		X		ICE	1					x		x	x						
23	TP7-1.6		X		ICE	1					x			x						
24	TP18-0		X		ICE	1	x													
25	TP18-0.4		X		ICE	1	x													
26	TP19-0		X		ICE	1	x													
	TP19-0.5		X		ICE	1														
27	TP20-0		X		ICE	1	x													
28	TP20-0.7		X		ICE	1				x										
	TP20-0.9		X		ICE	1														

CHAIN OF CUSTODY & ANALYSIS REQUEST

Sample Date: 7-9/11/2023

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Facsimile No: (02) 85940499
Telephone No: (02) 85940400
Email:
au.samplereceipt.sydney@sgs.com

Company Name:	JM Environments	Project Name/No:	JME21073
Address:	37 Tooke St	Purchase Order No:	JME21073
	COOKS HILL NSW 2300	Results Required By:	standard
Contact Name:	[redacted]	Telephone:	[redacted]
Telephone	[redacted]	Email:	j[redacted]

Reliquinshed by: J McMahon	Date /Time	Received by:	SGS	Date /Time	
Reliquinshed by:	Date /Time	Received by:		Date /Time	
Samples intact: Yes/No	Temperature	Sample Cooler Sealed Yes/No		Labortaory Quotation	170719EA

Lab ID	Lab Sample ID	Water	Soil	Other	Preservative	No. of Containers	BTEX/TPH PAH/8HM	8HM	OCP/PCB	Asbestos yes/no	VOC/TPH PAH/8HM	Asbestos Gravimetric	pH/CEC	Speciated phenols	BTEX					Comments
	TP20-1.2		X		ICE	1														
29	TP21-0		X		ICE	1	x													
	TP21-0.4		X		ICE	1														
30	TP22-0		X		ICE	1	x													
31	TP22-0.5		X		ICE	1	x													
	TP22-1.2		X		ICE	1														
32	TP23-0		X		ICE	1					x									
	TP23-0.5		X		ICE	1														
33	TP24-0		X		ICE	1					x		x							
	TP24--1		X		ICE	1														
34	TP25-0		X		ICE	1	x													
	TP25-0.5		X		ICE	1														
35	TP26-0		X		ICE	1	x													
	TP26-1		X		ICE	1														
36	TP7-0		X		ICE	1	x													
	TP27-2.5		X		ICE	1														
37	QC1		X		ICE	1	x													
~~28~~	QC1A		X		ICE	1	x													Send to ALS
38	QC2		X		ICE	1	x													
	QC2A		X		ICE	1	x													Send to ALS
39	Trip Blank		X		ICE	1									x					

CHAIN OF CUSTODY & ANALYSIS REQUEST

Sample Date: 7-9/11/2023

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Facsimile No: (02) 85940499
Telephone No: (02) 85940400
Email: [redacted]

Company Name:	JM Environments	Project Name/No:	JME21073
Address:	37 Tooke St	Purchase Order No:	JME21073
	[redacted] NSW 2300	Results Required By:	standard
Contact Name:	[redacted]	Telephone:	[redacted]

Reliquinshed by: J McMahon	Date /Time	Received by:	SGS	Date /Time
Reliquinshed by:	Date /Time	Received by:		Date /Time
Samples intact: Yes/No	Temperature	Sample Cooler Sealed Yes/No		Labortaory Quotation: 170719EA

Lab ID	Lab Sample ID	Water	Soil	Other	Preservative	No. of Containers	BTEX/TPH PAH/8HM	8HM	OCP/PCB	Asbestos yes/no	VOC/TPH PAH/8HM	Asbestos Gravimetric	pH/CEC	Speciated phenols	BTEX					Comments
40	Trip Spike		X		ICE	1									x					

SAMPLE RECEIPT ADVICE

SE256527

[redacted]

Project	**JME21073**	Samples Received	Fri 10/11/2023
Order Number	**JME21073**	Report Due	Fri 17/11/2023
Samples	40	SGS Reference	**SE256527**

SUBMISSION DETAILS

This is to confirm that 40 samples were received on Friday 10/ 11/2023. Results are expected to be ready by COB Friday 17/ 11/2023. Please quote SGS reference SE256527 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	39 Soil, 1 Material	Type of documentation received	COC
Date documentation received	10/11/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	14.3°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

21 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

[redacted]

SAMPLE RECEIPT ADVICE

SE256527

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	Speciated Phenols in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	SP1-1	-	26	-	1	-	10	11	7
002	SP1-2	30	26	11	-	-	10	11	7
003	SP1-3	-	26	-	-	-	10	11	7
004	TP1-0	-	26	-	-	-	10	11	7
005	TP1-0.4	-	26	-	1	18	9	79	7
006	TP1-0.6	-	26	-	-	-	10	11	7
007	TP2-0	-	26	-	-	18	9	79	7
008	TP2-0.6	-	26	-	-	-	9	79	7
009	TP5-0	-	26	-	-	-	10	11	7
010	TP5-1	-	26	-	1	18	9	79	7
011	TP6-0	-	26	-	-	-	9	79	7
012	TP6-1	-	26	-	-	-	10	11	7
013	TP7-0	-	26	-	-	-	10	11	7
014	TP8-0	-	26	-	-	-	10	11	7
015	TP10-0	-	26	-	-	-	10	11	7
016	TP10-0.4	-	26	-	-	-	10	11	7
017	TP12-0	-	26	-	-	-	10	11	7
018	TP13-0	-	26	-	-	-	10	11	7
019	TP14-0	-	26	-	-	-	10	11	7
020	TP15-0	-	26	-	-	-	10	11	7
021	TP16-0	-	26	-	1	18	9	79	7
022	TP17-0	-	26	-	1	18	9	79	7
023	TP7-1.6	-	26	-	-	18	9	79	7
024	TP18-0	-	26	-	-	-	10	11	7

CONTINUED OVERLEAF

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Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE256527

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	pH in soil (1:5)	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	TP18-0.4	26	-	10	11	7
026	TP19-0	26	-	10	11	7
027	TP20-0	26	-	10	11	7
029	TP21-0	26	-	10	11	7
030	TP22-0	26	-	10	11	7
031	TP22-0.5	26	-	10	11	7
032	TP23-0	26	-	9	79	7
033	TP24-0	26	1	9	79	7
034	TP25-0	26	-	10	11	7
035	TP26-0	26	-	10	11	7
036	TP7-0	26	-	10	11	7
037	QC1	26	-	10	11	7
038	QC2	26	-	10	11	7
039	Trip Blank	-	-	-	79	-
040	Trip Spike	-	-	-	79	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE256527

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	SP1-1	13	1	1	7
002	SP1-2	-	1	1	7
003	SP1-3	-	1	1	7
004	TP1-0	-	1	1	7
005	TP1-0.4	13	1	1	7
006	TP1-0.6	-	1	1	7
007	TP2-0	-	1	1	7
008	TP2-0.6	-	1	1	7
009	TP5-0	-	1	1	7
010	TP5-1	13	1	1	7
011	TP6-0	-	1	1	7
012	TP6-1	-	1	1	7
013	TP7-0	-	1	1	7
014	TP8-0	-	1	1	7
015	TP10-0	-	1	1	7
016	TP10-0.4	-	1	1	7
017	TP12-0	-	1	1	7
018	TP13-0	-	1	1	7
019	TP14-0	-	1	1	7
020	TP15-0	-	1	1	7
021	TP16-0	13	1	1	7
022	TP17-0	13	1	1	7
023	TP7-1.6	-	1	1	7
024	TP18-0	-	1	1	7

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE256527

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	TP18-0.4	-	1	1	7
026	TP19-0	-	1	1	7
027	TP20-0	-	1	1	7
029	TP21-0	-	1	1	7
030	TP22-0	-	1	1	7
031	TP22-0.5	-	1	1	7
032	TP23-0	-	1	1	7
033	TP24-0	13	1	1	7
034	TP25-0	-	1	1	7
035	TP26-0	-	1	1	7
036	TP7-0	-	1	1	7
037	QC1	-	1	1	7
038	QC2	-	1	1	7
039	Trip Blank	-	-	1	-

CONTINUED OVERLEAF

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The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE256527

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials
028	TP20-0.7	1

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The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

[redacted]

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam on 17/11/2023

[redacted]

VOC's in Soil [AN433] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	<1
Chloromethane	mg/kg	1	-	-	-	-	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	<0.1
Bromomethane	mg/kg	1	-	-	-	-	<1
Chloroethane	mg/kg	1	-	-	-	-	<1
Trichlorofluoromethane	mg/kg	1	-	-	-	-	<1
Acetone (2-propanone)	mg/kg	10	-	-	-	-	<10
Iodomethane	mg/kg	5	-	-	-	-	<5
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	<0.1
Acrylonitrile	mg/kg	0.1	-	-	-	-	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	<0.5
Allyl chloride	mg/kg	0.1	-	-	-	-	<0.1
Carbon disulfide	mg/kg	0.5	-	-	-	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	-	-	<0.1
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	<0.1
Vinyl acetate*	mg/kg	10	-	-	-	-	<10
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	<0.1
Bromochloromethane	mg/kg	0.1	-	-	-	-	<0.1
Chloroform (THM)	mg/kg	0.1	-	-	-	-	<0.1
2,2-dichloropropane	mg/kg	0.1	-	-	-	-	<0.1
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	<0.1
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	<0.1
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	<0.1
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	<0.1
Dibromomethane	mg/kg	0.1	-	-	-	-	<0.1
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	<0.1
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	-	-	-	-	<0.1
2-nitropropane	mg/kg	10	-	-	-	-	<10
Bromodichloromethane (THM)	mg/kg	0.1	-	-	-	-	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	<1
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	<0.1
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	<0.1
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	<0.1
Dibromochloromethane (THM)	mg/kg	0.1	-	-	-	-	<0.1
2-hexanone (MBK)	mg/kg	5	-	-	-	-	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	<0.1
Chlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
Bromoform (THM)	mg/kg	0.1	-	-	-	-	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	<0.1
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	<1
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	<0.1
Bromobenzene	mg/kg	0.1	-	-	-	-	<0.1

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
n-propylbenzene	mg/kg	0.1	-	-	-	-	<0.1
2-chlorotoluene	mg/kg	0.1	-	-	-	-	<0.1
4-chlorotoluene	mg/kg	0.1	-	-	-	-	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	<0.1
tert-butylbenzene	mg/kg	0.1	-	-	-	-	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	<0.1
sec-butylbenzene	mg/kg	0.1	-	-	-	-	<0.1
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	<0.1
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
n-butylbenzene	mg/kg	0.1	-	-	-	-	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	<0.1
Total VOC*	mg/kg	24	-	-	-	-	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	<1.8

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	<1	<1	-	<1
Chloromethane	mg/kg	1	-	<1	<1	-	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Bromomethane	mg/kg	1	-	<1	<1	-	<1
Chloroethane	mg/kg	1	-	<1	<1	-	<1
Trichlorofluoromethane	mg/kg	1	-	<1	<1	-	<1
Acetone (2-propanone)	mg/kg	10	-	<10	<10	-	<10
Iodomethane	mg/kg	5	-	<5	<5	-	<5
1,1-dichloroethene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Acrylonitrile	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	<0.5	<0.5	-	<0.5
Allyl chloride	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Carbon disulfide	mg/kg	0.5	-	<0.5	<0.5	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1-dichloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Vinyl acetate*	mg/kg	10	-	<10	<10	-	<10
cis-1,2-dichloroethene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Bromochloromethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Chloroform (THM)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
2,2-dichloropropane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2-dichloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1,1-trichloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1-dichloropropene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Carbon tetrachloride	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Dibromomethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2-dichloropropane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
2-nitropropane	mg/kg	10	-	<10	<10	-	<10
Bromodichloromethane (THM)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	<1	<1	-	<1
cis-1,3-dichloropropene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1,2-trichloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,3-dichloropropane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Dibromochloromethane (THM)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
2-hexanone (MBK)	mg/kg	5	-	<5	<5	-	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Chlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Bromoform (THM)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Styrene (Vinyl benzene)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2,3-trichloropropane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	-	<1	<1	-	<1
Isopropylbenzene (Cumene)	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Bromobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
n-propylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
2-chlorotoluene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
4-chlorotoluene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
tert-butylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
sec-butylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,3-dichlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,4-dichlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
p-isopropyltoluene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2-dichlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
n-butylbenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Hexachlorobutadiene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	-	<0.1	<0.1	-	<0.1
Total VOC*	mg/kg	24	-	<24	<24	-	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	<3.0	<3.0	-	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	<1.8	<1.8	-	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	<1.8	<1.8	-	<1.8

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-	-	-	-
Chloromethane	mg/kg	1	<1	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-	-	-	-
Bromomethane	mg/kg	1	<1	-	-	-	-
Chloroethane	mg/kg	1	<1	-	-	-	-
Trichlorofluoromethane	mg/kg	1	<1	-	-	-	-
Acetone (2-propanone)	mg/kg	10	<10	-	-	-	-
Iodomethane	mg/kg	5	<5	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	-	-	-	-
Acrylonitrile	mg/kg	0.1	<0.1	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-	-	-	-
Allyl chloride	mg/kg	0.1	<0.1	-	-	-	-
Carbon disulfide	mg/kg	0.5	<0.5	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	-	-	-	-
Vinyl acetate*	mg/kg	10	<10	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	-	-
Bromochloromethane	mg/kg	0.1	<0.1	-	-	-	-
Chloroform (THM)	mg/kg	0.1	<0.1	-	-	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	-	-	-	-
Dibromomethane	mg/kg	0.1	<0.1	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	-	-	-	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1	-	-	-	-
2-nitropropane	mg/kg	10	<10	-	-	-	-
Bromodichloromethane (THM)	mg/kg	0.1	<0.1	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	-	-	-	-
Dibromochloromethane (THM)	mg/kg	0.1	<0.1	-	-	-	-
2-hexanone (MBK)	mg/kg	5	<5	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	-	-
Chlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
Bromoform (THM)	mg/kg	0.1	<0.1	-	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-	-	-	-
Bromobenzene	mg/kg	0.1	<0.1	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
n-propylbenzene	mg/kg	0.1	<0.1	-	-	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	-	-	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-	-	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-	-	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
n-butylbenzene	mg/kg	0.1	<0.1	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-	-	-	-
Total VOC*	mg/kg	24	<24	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	-	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Acrylonitrile	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
Carbon disulfide	mg/kg	0.5	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
Vinyl acetate*	mg/kg	10	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
Chloroform (THM)	mg/kg	0.1	-	-	-	-	-
2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-
Bromodichloromethane (THM)	mg/kg	0.1	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Dibromochloromethane (THM)	mg/kg	0.1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromoform (THM)	mg/kg	0.1	-	-	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	-	-
Chloromethane	mg/kg	1	<1	<1	<1	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromomethane	mg/kg	1	<1	<1	<1	-	-
Chloroethane	mg/kg	1	<1	<1	<1	-	-
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	-	-
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	-	-
Iodomethane	mg/kg	5	<5	<5	<5	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Vinyl acetate*	mg/kg	10	<10	<10	<10	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chloroform (THM)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-nitropropane	mg/kg	10	<10	<10	<10	-	-
Bromodichloromethane (THM)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dibromochloromethane (THM)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromoform (THM)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Total VOC*	mg/kg	24	<24	<24	<24	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	-	-	-
Chloromethane	mg/kg	1	-	-	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	-	-	-
Bromomethane	mg/kg	1	-	-	-	-	-
Chloroethane	mg/kg	1	-	-	-	-	-
Trichlorofluoromethane	mg/kg	1	-	-	-	-	-
Acetone (2-propanone)	mg/kg	10	-	-	-	-	-
Iodomethane	mg/kg	5	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.1	-	-	-	-	-
Acrylonitrile	mg/kg	0.1	-	-	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	-	-	-
Allyl chloride	mg/kg	0.1	-	-	-	-	-
Carbon disulfide	mg/kg	0.5	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.1	-	-	-	-	-
Vinyl acetate*	mg/kg	10	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	-	-	-
Bromochloromethane	mg/kg	0.1	-	-	-	-	-
Chloroform (THM)	mg/kg	0.1	-	-	-	-	-
2,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.1	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.1	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.1	-	-	-	-	-
Dibromomethane	mg/kg	0.1	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.1	-	-	-	-	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	-	-	-	-	-
2-nitropropane	mg/kg	10	-	-	-	-	-
Bromodichloromethane (THM)	mg/kg	0.1	-	-	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.1	-	-	-	-	-
Dibromochloromethane (THM)	mg/kg	0.1	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5	-	-	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
Chlorobenzene	mg/kg	0.1	-	-	-	-	-
Bromoform (THM)	mg/kg	0.1	-	-	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	-	-	-
Bromobenzene	mg/kg	0.1	-	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
n-propylbenzene	mg/kg	0.1	-	-	-	-	-
2-chlorotoluene	mg/kg	0.1	-	-	-	-	-
4-chlorotoluene	mg/kg	0.1	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
tert-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	-	-	-
sec-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.1	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	-	-	-
n-butylbenzene	mg/kg	0.1	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	-	-	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	-	-	-
Total VOC*	mg/kg	24	-	-	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-	-	-
Chloromethane	mg/kg	1	<1	<1	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-	-	-
Bromomethane	mg/kg	1	<1	<1	-	-	-
Chloroethane	mg/kg	1	<1	<1	-	-	-
Trichlorofluoromethane	mg/kg	1	<1	<1	-	-	-
Acetone (2-propanone)	mg/kg	10	<10	<10	-	-	-
Iodomethane	mg/kg	5	<5	<5	-	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-	-	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	-	-	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
Vinyl acetate*	mg/kg	10	<10	<10	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-	-	-
Chloroform (THM)	mg/kg	0.1	<0.1	<0.1	-	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-	-	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1	<0.1	-	-	-
2-nitropropane	mg/kg	10	<10	<10	-	-	-
Bromodichloromethane (THM)	mg/kg	0.1	<0.1	<0.1	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	-
Dibromochloromethane (THM)	mg/kg	0.1	<0.1	<0.1	-	-	-
2-hexanone (MBK)	mg/kg	5	<5	<5	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
Bromoform (THM)	mg/kg	0.1	<0.1	<0.1	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	-
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-	-	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-	-
Total VOC*	mg/kg	24	<24	<24	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	-	-	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038	Trip Blank SOIL - 7/11/2023 SE256527.039	Trip Spike SOIL - 7/11/2023 SE256527.040
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[102%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[100%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[93%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[89%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[91%]
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	-
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	<1	-
Chloromethane	mg/kg	1	-	-	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	<0.1	-
Bromomethane	mg/kg	1	-	-	<1	-
Chloroethane	mg/kg	1	-	-	<1	-
Trichlorofluoromethane	mg/kg	1	-	-	<1	-
Acetone (2-propanone)	mg/kg	10	-	-	<10	-
Iodomethane	mg/kg	5	-	-	<5	-
1,1-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Acrylonitrile	mg/kg	0.1	-	-	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	<0.5	-
Allyl chloride	mg/kg	0.1	-	-	<0.1	-
Carbon disulfide	mg/kg	0.5	-	-	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	<0.1	-
1,1-dichloroethane	mg/kg	0.1	-	-	<0.1	-
Vinyl acetate*	mg/kg	10	-	-	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-
Bromochloromethane	mg/kg	0.1	-	-	<0.1	-
Chloroform (THM)	mg/kg	0.1	-	-	<0.1	-
2,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,1-dichloropropene	mg/kg	0.1	-	-	<0.1	-
Carbon tetrachloride	mg/kg	0.1	-	-	<0.1	-
Dibromomethane	mg/kg	0.1	-	-	<0.1	-
1,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-
Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	-	-	<0.1	-
2-nitropropane	mg/kg	10	-	-	<10	-
Bromodichloromethane (THM)	mg/kg	0.1	-	-	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	-	-	<0.1	-
1,3-dichloropropane	mg/kg	0.1	-	-	<0.1	-
Dibromochloromethane (THM)	mg/kg	0.1	-	-	<0.1	-
2-hexanone (MBK)	mg/kg	5	-	-	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
Chlorobenzene	mg/kg	0.1	-	-	<0.1	-
Bromoform (THM)	mg/kg	0.1	-	-	<0.1	-
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	-	-	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	<0.1	-
Bromobenzene	mg/kg	0.1	-	-	<0.1	-

VOC's in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038	Trip Blank SOIL - 7/11/2023 SE256527.039	Trip Spike SOIL - 7/11/2023 SE256527.040
n-propylbenzene	mg/kg	0.1	-	-	<0.1	-
2-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
4-chlorotoluene	mg/kg	0.1	-	-	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
tert-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-
sec-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
p-isopropyltoluene	mg/kg	0.1	-	-	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-
n-butylbenzene	mg/kg	0.1	-	-	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	-	-	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-
Total VOC*	mg/kg	24	-	-	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	**61**
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	**84**
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	**84**

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
TRH C10-C14	mg/kg	20	<20	27	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	68	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	71	96	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	40	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	40	<25	<25	-
TRH >C16-C34 (F3)	mg/kg	90	<90	100	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	170	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	840
TRH C15-C28	mg/kg	45	<45	<45	<45	150	1000
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	26	1100
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-	26	-
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	140	740
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	150	1800
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	1800

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	55	<45	100
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	350
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	270
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	300
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	420
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	450
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	720

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
TRH C10-C14	mg/kg	20	<20	<20	**50**	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	**120**	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	**160**	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	**61**	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	**61**	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	**250**	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	**330**	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	**310**	<210	<210

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	**71**	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	**130**	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	**150**	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	**150**	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	**210**	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	**300**	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	60	<45
TRH C29-C36	mg/kg	45	<45	64
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	**0.1**	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	**0.2**	**0.1**	<0.1	<0.1
Pyrene	mg/kg	0.1	**0.2**	**0.2**	**0.1**	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	**0.1**	**0.1**	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	**0.1**	**0.2**	**0.1**	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	**0.1**	**0.1**	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	**0.1**	**0.2**	**0.1**	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	**0.3**	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	**0.2**	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	**1.0**	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	**1.0**	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.2**
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**3.6**
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.4**
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.7**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.3**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**9.4**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**4.6**

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.1**
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	**0.1**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.3**
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.3**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.2**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.4**
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.1**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.2**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.4**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	**1.6**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	**1.6**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	**1.6**
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**6.7**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**6.7**

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	**0.5**	**0.2**	**0.1**
Anthracene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	**2.2**	**0.6**	**0.1**
Pyrene	mg/kg	0.1	<0.1	<0.1	**2.1**	**0.6**	**0.2**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	**0.9**	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	**1.0**	**0.3**	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	**1.4**	**0.5**	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.6**	**0.2**	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	**1.2**	**0.4**	**0.1**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	**1.0**	**0.4**	**0.1**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	**1.0**	**0.5**	**0.2**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	**1.8**	**0.5**	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	**1.8**	**0.6**	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	**1.8**	**0.6**	**0.2**
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	**12**	**3.6**	**0.8**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	**12**	**3.6**	**0.8**

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	**0.3**	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.4**	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	**0.4**	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.3**	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	**0.3**	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	**0.4**	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	**0.3**	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	**2.4**	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	**2.4**	<0.8	<0.8

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.8**	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.9**	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.9**	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.8**	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.8**	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.4**	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.5**	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.3**	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.2**	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.1**	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.5**	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**1.8**	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	**1.8**	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**1.8**	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	**13**	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	**13**	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.3
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.4	0.3	0.5
Pyrene	mg/kg	0.1	<0.1	<0.1	0.4	0.3	0.6
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.1	0.1	0.2
Chrysene	mg/kg	0.1	<0.1	<0.1	0.2	0.2	0.2
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	0.3	0.2
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	0.3	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	0.3	0.2
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	0.2	0.3	0.2
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	0.3	0.4	0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	0.4	0.5	0.4
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	0.3	0.4	0.4
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	2.1	2.2	2.7
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	2.1	2.2	2.7

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.2	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.6	0.1
Pyrene	mg/kg	0.1	0.7	0.1
Benzo(a)anthracene	mg/kg	0.1	0.3	<0.1
Chrysene	mg/kg	0.1	0.4	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.4	0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.2	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.4	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.3	0.2
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	0.5	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	0.6	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	0.5	<0.2
Total PAH (18)	mg/kg	0.8	3.7	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	3.7	<0.8

OC Pesticides in Soil [AN420] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-2 SOIL - 7/11/2023 SE256527.002
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

PCBs in Soil [AN420] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-2 SOIL - 7/11/2023 SE256527.002
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Speciated Phenols in Soil [AN420] Tested: 15/11/2023

PARAMETER	UOM	LOR	TP1-0.4 SOIL - 7/11/2023 SE256527.005	TP2-0 SOIL - 7/11/2023 SE256527.007	TP5-1 SOIL - 7/11/2023 SE256527.010	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

PARAMETER	UOM	LOR	TP7-1.6 SOIL - 7/11/2023 SE256527.023
Phenol	mg/kg	0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
Total Cresol	mg/kg	1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5
4-nitrophenol	mg/kg	1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5
Pentachlorophenol	mg/kg	0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
4-chloro-3-methylphenol	mg/kg	2	<2

pH in soil (1:5) [AN101] Tested: 17/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	TP1-0.4 SOIL - 7/11/2023 SE256527.005	TP5-1 SOIL - 7/11/2023 SE256527.010	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022
pH	pH Units	0.1	6.9	6.7	9.2	5.8	6.9

PARAMETER	UOM	LOR	TP24-0 SOIL - 7/11/2023 SE256527.033
pH	pH Units	0.1	7.5

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 20/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	TP1-0.4 SOIL - 7/11/2023 SE256527.005	TP5-1 SOIL - 7/11/2023 SE256527.010	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022
Exchangeable Calcium, Ca	mg/kg	2	2300	500	2000	280	730
Exchangeable Calcium, Ca	meq/100g	0.01	12	2.5	9.8	1.4	3.7
Exchangeable Calcium Percentage*	%	0.1	85.9	37.0	72.8	70.8	82.4
Exchangeable Potassium, K	mg/kg	2	110	50	82	13	65
Exchangeable Potassium, K	meq/100g	0.01	0.28	0.13	0.21	0.03	0.17
Exchangeable Potassium Percentage*	%	0.1	2.1	1.9	1.6	1.6	3.7
Exchangeable Magnesium, Mg	mg/kg	2	180	380	330	59	61
Exchangeable Magnesium, Mg	meq/100g	0.02	1.5	3.1	2.7	0.48	0.50
Exchangeable Magnesium Percentage*	%	0.1	11.2	46.3	19.9	24.2	11.3
Exchangeable Sodium, Na	mg/kg	2	25	230	180	16	27
Exchangeable Sodium, Na	meq/100g	0.01	0.11	1.0	0.76	0.07	0.12
Exchangeable Sodium Percentage*	%	0.1	0.8	14.9	5.7	3.4	2.6
Cation Exchange Capacity	meq/100g	0.02	13	6.7	13	2.0	4.4

PARAMETER	UOM	LOR	TP24-0 SOIL - 7/11/2023 SE256527.033
Exchangeable Calcium, Ca	mg/kg	2	370
Exchangeable Calcium, Ca	meq/100g	0.01	1.8
Exchangeable Calcium Percentage*	%	0.1	31.3
Exchangeable Potassium, K	mg/kg	2	62
Exchangeable Potassium, K	meq/100g	0.01	0.16
Exchangeable Potassium Percentage*	%	0.1	2.7
Exchangeable Magnesium, Mg	mg/kg	2	380
Exchangeable Magnesium, Mg	meq/100g	0.02	3.1
Exchangeable Magnesium Percentage*	%	0.1	53.1
Exchangeable Sodium, Na	mg/kg	2	170
Exchangeable Sodium, Na	meq/100g	0.01	0.76
Exchangeable Sodium Percentage*	%	0.1	12.9
Cation Exchange Capacity	meq/100g	0.02	5.9

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
Arsenic, As	mg/kg	1	4	3	3	5	15
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	7.9	8.0	6.5	1.4	33
Copper, Cu	mg/kg	0.5	9.1	7.4	8.8	1.1	7.5
Lead, Pb	mg/kg	1	12	12	12	38	27
Nickel, Ni	mg/kg	0.5	3.9	3.3	3.1	<0.5	4.5
Zinc, Zn	mg/kg	2	67	70	68	15	39

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
Arsenic, As	mg/kg	1	23	2	12	<1	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	41	<0.5	31	0.7	4.0
Copper, Cu	mg/kg	0.5	3.1	<0.5	11	1.7	6.1
Lead, Pb	mg/kg	1	24	2	57	7	12
Nickel, Ni	mg/kg	0.5	3.0	<0.5	4.7	<0.5	1.1
Zinc, Zn	mg/kg	2	24	<2.0	64	14	37

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
Arsenic, As	mg/kg	1	3	3	3	4	26
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	1.7	1.9	1.9	19	93
Copper, Cu	mg/kg	0.5	1.3	1.5	1.4	38	11
Lead, Pb	mg/kg	1	10	11	11	35	44
Nickel, Ni	mg/kg	0.5	1.3	1.0	3.0	22	3.1
Zinc, Zn	mg/kg	2	20	24	25	72	29

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
Arsenic, As	mg/kg	1	2	3	4	3	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	24	1.0	6.4	5.8	31
Copper, Cu	mg/kg	0.5	7.2	0.7	10	10	9.8
Lead, Pb	mg/kg	1	10	9	75	92	29
Nickel, Ni	mg/kg	0.5	4.6	0.5	2.4	2.4	4.1
Zinc, Zn	mg/kg	2	32	17	45	39	86

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
Arsenic, As	mg/kg	1	3	2	8	2	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.5	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	3.2	1.1	8.2	4.7	1.9
Copper, Cu	mg/kg	0.5	4.9	0.6	26	5.5	1.6
Lead, Pb	mg/kg	1	20	12	110	6	13
Nickel, Ni	mg/kg	0.5	2.3	0.8	7.3	2.5	1.5
Zinc, Zn	mg/kg	2	69	22	140	22	19

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
Arsenic, As	mg/kg	1	3	3	5	3	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	4.9	10	11	6.8	32
Copper, Cu	mg/kg	0.5	5.4	10	7.4	5.9	1.9
Lead, Pb	mg/kg	1	15	12	15	31	21
Nickel, Ni	mg/kg	0.5	3.0	5.6	7.1	3.0	7.5
Zinc, Zn	mg/kg	2	25	42	49	44	17

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
Arsenic, As	mg/kg	1	3	1	4	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.7	6.5	19	8.0	7.4
Copper, Cu	mg/kg	0.5	9.1	9.6	13	8.3	4.8
Lead, Pb	mg/kg	1	9	5	16	30	15
Nickel, Ni	mg/kg	0.5	7.0	6.6	8.7	4.3	3.8
Zinc, Zn	mg/kg	2	28	27	51	57	29

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038
Arsenic, As	mg/kg	1	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.0	6.0
Copper, Cu	mg/kg	0.5	2.4	8.7
Lead, Pb	mg/kg	1	20	12
Nickel, Ni	mg/kg	0.5	1.4	2.8
Zinc, Zn	mg/kg	2	18	67

Mercury in Soil [AN312] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
Mercury	mg/kg	0.05	<0.05	<0.05	**0.06**	<0.05	<0.05

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Mercury in Soil [AN312] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 15/11/2023

PARAMETER	UOM	LOR	SP1-1 SOIL - 7/11/2023 SE256527.001	SP1-2 SOIL - 7/11/2023 SE256527.002	SP1-3 SOIL - 7/11/2023 SE256527.003	TP1-0 SOIL - 7/11/2023 SE256527.004	TP1-0.4 SOIL - 7/11/2023 SE256527.005
% Moisture	%w/w	1	19.0	18.1	18.4	15.3	19.2

PARAMETER	UOM	LOR	TP1-0.6 SOIL - 7/11/2023 SE256527.006	TP2-0 SOIL - 7/11/2023 SE256527.007	TP2-0.6 SOIL - 7/11/2023 SE256527.008	TP5-0 SOIL - 7/11/2023 SE256527.009	TP5-1 SOIL - 7/11/2023 SE256527.010
% Moisture	%w/w	1	16.4	12.7	19.8	6.9	15.9

PARAMETER	UOM	LOR	TP6-0 SOIL - 7/11/2023 SE256527.011	TP6-1 SOIL - 7/11/2023 SE256527.012	TP7-0 SOIL - 7/11/2023 SE256527.013	TP8-0 SOIL - 7/11/2023 SE256527.014	TP10-0 SOIL - 7/11/2023 SE256527.015
% Moisture	%w/w	1	6.6	11.4	4.1	10.8	11.5

PARAMETER	UOM	LOR	TP10-0.4 SOIL - 7/11/2023 SE256527.016	TP12-0 SOIL - 7/11/2023 SE256527.017	TP13-0 SOIL - 7/11/2023 SE256527.018	TP14-0 SOIL - 7/11/2023 SE256527.019	TP15-0 SOIL - 7/11/2023 SE256527.020
% Moisture	%w/w	1	16.1	5.2	18.0	9.2	5.3

PARAMETER	UOM	LOR	TP16-0 SOIL - 7/11/2023 SE256527.021	TP17-0 SOIL - 7/11/2023 SE256527.022	TP7-1.6 SOIL - 7/11/2023 SE256527.023	TP18-0 SOIL - 7/11/2023 SE256527.024	TP18-0.4 SOIL - 7/11/2023 SE256527.025
% Moisture	%w/w	1	13.4	6.3	34.5	13.5	7.7

PARAMETER	UOM	LOR	TP19-0 SOIL - 7/11/2023 SE256527.026	TP20-0 SOIL - 7/11/2023 SE256527.027	TP21-0 SOIL - 7/11/2023 SE256527.029	TP22-0 SOIL - 7/11/2023 SE256527.030	TP22-0.5 SOIL - 7/11/2023 SE256527.031
% Moisture	%w/w	1	8.8	8.0	9.1	7.7	17.9

PARAMETER	UOM	LOR	TP23-0 SOIL - 7/11/2023 SE256527.032	TP24-0 SOIL - 7/11/2023 SE256527.033	TP25-0 SOIL - 7/11/2023 SE256527.034	TP26-0 SOIL - 7/11/2023 SE256527.035	TP7-0 SOIL - 7/11/2023 SE256527.036
% Moisture	%w/w	1	7.0	7.1	24.2	15.8	19.3

Moisture Content [AN002] Tested: 15/11/2023 (continued)

PARAMETER	UOM	LOR	QC1 SOIL - 7/11/2023 SE256527.037	QC2 SOIL - 7/11/2023 SE256527.038	Trip Blank SOIL - 7/11/2023 SE256527.039
% Moisture	%w/w	1	**22.4**	**13.5**	<1.0

Fibre ID in bulk materials [AN602/AS4964] Tested: 17/11/2023

PARAMETER	UOM	LOR	TP20-0.7 MATERIAL - 7/11/2023 SE256527.028
Asbestos Detected	No unit	-	Yes

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN122	Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
AN122	The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100. ESP can be used to categorise the sodicity of the soil as below: ESP < 6% non-sodic ESP 6-15% sodic ESP >15% strongly sodic Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-qb/environment-health-and-safety.

STATEMENT OF QA/QC PERFORMANCE

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[redacted]

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	pH in soil (1:5)	6 items
Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	5 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	3 items
	TRH (Total Recoverable Hydrocarbons) in Soil	6 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	2 items

SAMPLE SUMMARY

Sample counts by matrix	39 Soil, 1 Material	Type of documentation received	COC
Date documentation received	10/11/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	14.3°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

[redacted]

HOLDING TIME SUMMARY

SE256527 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023
TP1-0.4	SE256527.005	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023
TP5-1	SE256527.010	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023
TP16-0	SE256527.021	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023
TP17-0	SE256527.022	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023
TP24-0	SE256527.033	LB297043	07 Nov 2023	10 Nov 2023	05 Dec 2023	20 Nov 2023	05 Dec 2023	22 Nov 2023

Fibre ID in bulk materials

Method: ME-(AU)-[ENV]AN602/AS4964

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP20-0.7	SE256527.028	LB296901	07 Nov 2023	10 Nov 2023	06 Nov 2024	17 Nov 2023	06 Nov 2024	17 Nov 2023

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
SP1-2	SE256527.002	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
SP1-3	SE256527.003	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP1-0	SE256527.004	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP1-0.4	SE256527.005	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP1-0.6	SE256527.006	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP2-0	SE256527.007	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP2-0.6	SE256527.008	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP5-0	SE256527.009	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP5-1	SE256527.010	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP6-0	SE256527.011	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP6-1	SE256527.012	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP7-0	SE256527.013	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP8-0	SE256527.014	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP10-0	SE256527.015	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP10-0.4	SE256527.016	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP12-0	SE256527.017	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP13-0	SE256527.018	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP14-0	SE256527.019	LB296714	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	17 Nov 2023
TP15-0	SE256527.020	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP16-0	SE256527.021	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP17-0	SE256527.022	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP18-0	SE256527.024	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP19-0	SE256527.026	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP20-0	SE256527.027	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP21-0	SE256527.029	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP22-0	SE256527.030	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP23-0	SE256527.032	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP24-0	SE256527.033	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP25-0	SE256527.034	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP26-0	SE256527.035	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
TP7-0	SE256527.036	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
QC1	SE256527.037	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023
QC2	SE256527.038	LB296715	07 Nov 2023	10 Nov 2023	05 Dec 2023	15 Nov 2023	05 Dec 2023	20 Nov 2023

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
SP1-2	SE256527.002	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
SP1-3	SE256527.003	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP1-0	SE256527.004	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP1-0.4	SE256527.005	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP1-0.6	SE256527.006	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP2-0	SE256527.007	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023

HOLDING TIME SUMMARY

SE256527 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content (continued)

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP2-0.6	SE256527.008	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP5-0	SE256527.009	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP5-1	SE256527.010	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP6-0	SE256527.011	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP6-1	SE256527.012	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP7-0	SE256527.013	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP8-0	SE256527.014	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP10-0	SE256527.015	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP10-0.4	SE256527.016	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP12-0	SE256527.017	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP13-0	SE256527.018	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP14-0	SE256527.019	LB296683	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	17 Nov 2023
TP15-0	SE256527.020	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP16-0	SE256527.021	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP17-0	SE256527.022	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP18-0	SE256527.024	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP19-0	SE256527.026	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP20-0	SE256527.027	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP21-0	SE256527.029	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP22-0	SE256527.030	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP23-0	SE256527.032	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP24-0	SE256527.033	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP25-0	SE256527.034	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP26-0	SE256527.035	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
TP7-0	SE256527.036	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
QC1	SE256527.037	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
QC2	SE256527.038	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023
Trip Blank	SE256527.039	LB296684	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	20 Nov 2023	20 Nov 2023

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-2	SE256527.002	LB296623	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
SP1-2	SE256527.002	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
SP1-3	SE256527.003	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0	SE256527.004	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0.4	SE256527.005	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0.6	SE256527.006	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP2-0	SE256527.007	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP2-0.6	SE256527.008	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP5-0	SE256527.009	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP5-1	SE256527.010	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP6-0	SE256527.011	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP6-1	SE256527.012	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-0	SE256527.013	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP8-0	SE256527.014	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP10-0	SE256527.015	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP10-0.4	SE256527.016	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP12-0	SE256527.017	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP13-0	SE256527.018	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP14-0	SE256527.019	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP15-0	SE256527.020	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP16-0	SE256527.021	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP17-0	SE256527.022	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

HOLDING TIME SUMMARY

SE256527 R0

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Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7-1.6	SE256527.023	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP18-0	SE256527.024	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP19-0	SE256527.026	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP20-0	SE256527.027	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP21-0	SE256527.029	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP22-0	SE256527.030	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP23-0	SE256527.032	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP24-0	SE256527.033	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP25-0	SE256527.034	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP26-0	SE256527.035	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-0	SE256527.036	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
QC1	SE256527.037	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
QC2	SE256527.038	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-2	SE256527.002	LB296623	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023
TP1-0.4	SE256527.005	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023
TP5-1	SE256527.010	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023
TP16-0	SE256527.021	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023
TP17-0	SE256527.022	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023
TP24-0	SE256527.033	LB296908	07 Nov 2023	10 Nov 2023	14 Nov 2023	17 Nov 2023†	18 Nov 2023	17 Nov 2023

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP1-0.4	SE256527.005	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP2-0	SE256527.007	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP5-1	SE256527.010	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP16-0	SE256527.021	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP17-0	SE256527.022	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296620	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
SP1-2	SE256527.002	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
SP1-3	SE256527.003	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP1-0	SE256527.004	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP1-0.4	SE256527.005	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP1-0.6	SE256527.006	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP2-0	SE256527.007	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP2-0.6	SE256527.008	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP5-0	SE256527.009	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP5-1	SE256527.010	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP6-0	SE256527.011	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP6-1	SE256527.012	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP7-0	SE256527.013	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP8-0	SE256527.014	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP10-0	SE256527.015	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP10-0.4	SE256527.016	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP12-0	SE256527.017	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP13-0	SE256527.018	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP14-0	SE256527.019	LB296702	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	17 Nov 2023
TP15-0	SE256527.020	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP16-0	SE256527.021	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023

HOLDING TIME SUMMARY

SE256527 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP17-0	SE256527.022	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP7-1.6	SE256527.023	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP18-0	SE256527.024	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP18-0.4	SE256527.025	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP19-0	SE256527.026	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP20-0	SE256527.027	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP21-0	SE256527.029	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP22-0	SE256527.030	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP22-0.5	SE256527.031	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP23-0	SE256527.032	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP24-0	SE256527.033	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP25-0	SE256527.034	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP26-0	SE256527.035	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
TP7-0	SE256527.036	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
QC1	SE256527.037	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023
QC2	SE256527.038	LB296703	07 Nov 2023	10 Nov 2023	05 May 2024	15 Nov 2023	05 May 2024	20 Nov 2023

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
SP1-2	SE256527.002	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
SP1-3	SE256527.003	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0	SE256527.004	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0.4	SE256527.005	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP1-0.6	SE256527.006	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP2-0	SE256527.007	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP2-0.6	SE256527.008	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP5-0	SE256527.009	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP5-1	SE256527.010	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP6-0	SE256527.011	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP6-1	SE256527.012	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-0	SE256527.013	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP8-0	SE256527.014	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP10-0	SE256527.015	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP10-0.4	SE256527.016	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP12-0	SE256527.017	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP13-0	SE256527.018	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP14-0	SE256527.019	LB296624	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP15-0	SE256527.020	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP16-0	SE256527.021	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP17-0	SE256527.022	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP18-0	SE256527.024	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP19-0	SE256527.026	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP20-0	SE256527.027	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP21-0	SE256527.029	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP22-0	SE256527.030	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP23-0	SE256527.032	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP24-0	SE256527.033	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP25-0	SE256527.034	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP26-0	SE256527.035	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
TP7-0	SE256527.036	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
QC1	SE256527.037	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023
QC2	SE256527.038	LB296625	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	25 Dec 2023	20 Nov 2023

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
SP1-2	SE256527.002	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023

HOLDING TIME SUMMARY

SE256527 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-3	SE256527.003	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0	SE256527.004	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0.4	SE256527.005	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0.6	SE256527.006	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP2-0	SE256527.007	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP2-0.6	SE256527.008	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP5-0	SE256527.009	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP5-1	SE256527.010	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP6-0	SE256527.011	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP6-1	SE256527.012	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-0	SE256527.013	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP8-0	SE256527.014	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP10-0	SE256527.015	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP10-0.4	SE256527.016	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP12-0	SE256527.017	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP13-0	SE256527.018	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP14-0	SE256527.019	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP15-0	SE256527.020	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP16-0	SE256527.021	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP17-0	SE256527.022	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP18-0	SE256527.024	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP19-0	SE256527.026	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP20-0	SE256527.027	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP21-0	SE256527.029	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP22-0	SE256527.030	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP23-0	SE256527.032	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP24-0	SE256527.033	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP25-0	SE256527.034	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP26-0	SE256527.035	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-0	SE256527.036	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
QC1	SE256527.037	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
QC2	SE256527.038	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
Trip Blank	SE256527.039	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
Trip Spike	SE256527.040	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SP1-1	SE256527.001	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
SP1-2	SE256527.002	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
SP1-3	SE256527.003	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0	SE256527.004	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0.4	SE256527.005	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP1-0.6	SE256527.006	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP2-0	SE256527.007	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP2-0.6	SE256527.008	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP5-0	SE256527.009	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP5-1	SE256527.010	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP6-0	SE256527.011	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP6-1	SE256527.012	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-0	SE256527.013	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP8-0	SE256527.014	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP10-0	SE256527.015	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP10-0.4	SE256527.016	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP12-0	SE256527.017	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP13-0	SE256527.018	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP14-0	SE256527.019	LB296661	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP15-0	SE256527.020	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023

HOLDING TIME SUMMARY

SE256527 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP16-0	SE256527.021	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP17-0	SE256527.022	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-1.6	SE256527.023	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP18-0	SE256527.024	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP18-0.4	SE256527.025	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP19-0	SE256527.026	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP20-0	SE256527.027	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP21-0	SE256527.029	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP22-0	SE256527.030	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP22-0.5	SE256527.031	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP23-0	SE256527.032	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP24-0	SE256527.033	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP25-0	SE256527.034	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP26-0	SE256527.035	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
TP7-0	SE256527.036	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
QC1	SE256527.037	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
QC2	SE256527.038	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
Trip Blank	SE256527.039	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023
Trip Spike	SE256527.040	LB296662	07 Nov 2023	10 Nov 2023	21 Nov 2023	15 Nov 2023	21 Nov 2023	20 Nov 2023

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	SP1-2	SE256527.002	%	60 - 130%	91

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	SP1-1	SE256527.001	%	70 - 130%	99
	SP1-2	SE256527.002	%	70 - 130%	98
	SP1-3	SE256527.003	%	70 - 130%	99
	TP1-0	SE256527.004	%	70 - 130%	98
	TP1-0.4	SE256527.005	%	70 - 130%	98
	TP1-0.6	SE256527.006	%	70 - 130%	97
	TP2-0	SE256527.007	%	70 - 130%	95
	TP2-0.6	SE256527.008	%	70 - 130%	97
	TP5-0	SE256527.009	%	70 - 130%	97
	TP5-1	SE256527.010	%	70 - 130%	106
	TP6-0	SE256527.011	%	70 - 130%	96
	TP6-1	SE256527.012	%	70 - 130%	96
	TP7-0	SE256527.013	%	70 - 130%	98
	TP8-0	SE256527.014	%	70 - 130%	99
	TP10-0	SE256527.015	%	70 - 130%	94
	TP10-0.4	SE256527.016	%	70 - 130%	96
	TP12-0	SE256527.017	%	70 - 130%	96
	TP13-0	SE256527.018	%	70 - 130%	97
	TP14-0	SE256527.019	%	70 - 130%	97
	TP15-0	SE256527.020	%	70 - 130%	107
	TP16-0	SE256527.021	%	70 - 130%	106
	TP17-0	SE256527.022	%	70 - 130%	104
	TP7-1.6	SE256527.023	%	70 - 130%	109
	TP18-0	SE256527.024	%	70 - 130%	106
	TP18-0.4	SE256527.025	%	70 - 130%	105
	TP19-0	SE256527.026	%	70 - 130%	104
	TP20-0	SE256527.027	%	70 - 130%	107
	TP21-0	SE256527.029	%	70 - 130%	106
	TP22-0	SE256527.030	%	70 - 130%	102
	TP22-0.5	SE256527.031	%	70 - 130%	108
	TP23-0	SE256527.032	%	70 - 130%	107
	TP24-0	SE256527.033	%	70 - 130%	104
	TP25-0	SE256527.034	%	70 - 130%	109
	TP26-0	SE256527.035	%	70 - 130%	110
	TP7-0	SE256527.036	%	70 - 130%	109
	QC1	SE256527.037	%	70 - 130%	107
	QC2	SE256527.038	%	70 - 130%	108
d14-p-terphenyl (Surrogate)	SP1-1	SE256527.001	%	70 - 130%	102
	SP1-2	SE256527.002	%	70 - 130%	100
	SP1-3	SE256527.003	%	70 - 130%	100
	TP1-0	SE256527.004	%	70 - 130%	100
	TP1-0.4	SE256527.005	%	70 - 130%	103
	TP1-0.6	SE256527.006	%	70 - 130%	102
	TP2-0	SE256527.007	%	70 - 130%	101
	TP2-0.6	SE256527.008	%	70 - 130%	101
	TP5-0	SE256527.009	%	70 - 130%	98
	TP5-1	SE256527.010	%	70 - 130%	95
	TP6-0	SE256527.011	%	70 - 130%	102
	TP6-1	SE256527.012	%	70 - 130%	102
	TP7-0	SE256527.013	%	70 - 130%	100
	TP8-0	SE256527.014	%	70 - 130%	102
	TP10-0	SE256527.015	%	70 - 130%	97
	TP10-0.4	SE256527.016	%	70 - 130%	100
	TP12-0	SE256527.017	%	70 - 130%	100
	TP13-0	SE256527.018	%	70 - 130%	98
	TP14-0	SE256527.019	%	70 - 130%	99

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	TP15-0	SE256527.020	%	70 - 130%	113
	TP16-0	SE256527.021	%	70 - 130%	114
	TP17-0	SE256527.022	%	70 - 130%	113
	TP7-1.6	SE256527.023	%	70 - 130%	114
	TP18-0	SE256527.024	%	70 - 130%	116
	TP18-0.4	SE256527.025	%	70 - 130%	112
	TP19-0	SE256527.026	%	70 - 130%	113
	TP20-0	SE256527.027	%	70 - 130%	113
	TP21-0	SE256527.029	%	70 - 130%	113
	TP22-0	SE256527.030	%	70 - 130%	102
	TP22-0.5	SE256527.031	%	70 - 130%	116
	TP23-0	SE256527.032	%	70 - 130%	116
	TP24-0	SE256527.033	%	70 - 130%	113
	TP25-0	SE256527.034	%	70 - 130%	116
	TP26-0	SE256527.035	%	70 - 130%	114
	TP7-0	SE256527.036	%	70 - 130%	117
	QC1	SE256527.037	%	70 - 130%	114
	QC2	SE256527.038	%	70 - 130%	116
d5-nitrobenzene (Surrogate)	SP1-1	SE256527.001	%	70 - 130%	100
	SP1-2	SE256527.002	%	70 - 130%	104
	SP1-3	SE256527.003	%	70 - 130%	105
	TP1-0	SE256527.004	%	70 - 130%	104
	TP1-0.4	SE256527.005	%	70 - 130%	102
	TP1-0.6	SE256527.006	%	70 - 130%	100
	TP2-0	SE256527.007	%	70 - 130%	100
	TP2-0.6	SE256527.008	%	70 - 130%	98
	TP5-0	SE256527.009	%	70 - 130%	105
	TP5-1	SE256527.010	%	70 - 130%	114
	TP6-0	SE256527.011	%	70 - 130%	102
	TP6-1	SE256527.012	%	70 - 130%	98
	TP7-0	SE256527.013	%	70 - 130%	100
	TP8-0	SE256527.014	%	70 - 130%	103
	TP10-0	SE256527.015	%	70 - 130%	99
	TP10-0.4	SE256527.016	%	70 - 130%	102
	TP12-0	SE256527.017	%	70 - 130%	103
	TP13-0	SE256527.018	%	70 - 130%	102
	TP14-0	SE256527.019	%	70 - 130%	103
	TP15-0	SE256527.020	%	70 - 130%	127
	TP16-0	SE256527.021	%	70 - 130%	122
	TP17-0	SE256527.022	%	70 - 130%	110
	TP7-1.6	SE256527.023	%	70 - 130%	122
	TP18-0	SE256527.024	%	70 - 130%	116
	TP18-0.4	SE256527.025	%	70 - 130%	122
	TP19-0	SE256527.026	%	70 - 130%	120
	TP20-0	SE256527.027	%	70 - 130%	122
	TP21-0	SE256527.029	%	70 - 130%	120
	TP22-0	SE256527.030	%	70 - 130%	114
	TP22-0.5	SE256527.031	%	70 - 130%	117
	TP23-0	SE256527.032	%	70 - 130%	114
	TP24-0	SE256527.033	%	70 - 130%	111
	TP25-0	SE256527.034	%	70 - 130%	124
	TP26-0	SE256527.035	%	70 - 130%	125
	TP7-0	SE256527.036	%	70 - 130%	122
	QC1	SE256527.037	%	70 - 130%	121
	QC2	SE256527.038	%	70 - 130%	122

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	SP1-2	SE256527.002	%	60 - 130%	89

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	TP1-0.4	SE256527.005	%	70 - 130%	113
	TP2-0	SE256527.007	%	70 - 130%	98
	TP5-1	SE256527.010	%	70 - 130%	96
	TP16-0	SE256527.021	%	70 - 130%	100
	TP17-0	SE256527.022	%	70 - 130%	95
	TP7-1.6	SE256527.023	%	70 - 130%	89
d5-phenol (Surrogate)	TP1-0.4	SE256527.005	%	50 - 130%	109
	TP2-0	SE256527.007	%	50 - 130%	95
	TP5-1	SE256527.010	%	50 - 130%	97
	TP16-0	SE256527.021	%	50 - 130%	97
	TP17-0	SE256527.022	%	50 - 130%	93
	TP7-1.6	SE256527.023	%	50 - 130%	91

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	80
	SP1-3	SE256527.003	%	60 - 130%	80
	TP1-0	SE256527.004	%	60 - 130%	86
	TP1-0.4	SE256527.005	%	60 - 130%	86
	TP1-0.6	SE256527.006	%	60 - 130%	90
	TP2-0	SE256527.007	%	60 - 130%	76
	TP2-0.6	SE256527.008	%	60 - 130%	86
	TP5-0	SE256527.009	%	60 - 130%	93
	TP5-1	SE256527.010	%	60 - 130%	109
	TP6-0	SE256527.011	%	60 - 130%	129
	TP6-1	SE256527.012	%	60 - 130%	98
	TP7-0	SE256527.013	%	60 - 130%	101
	TP8-0	SE256527.014	%	60 - 130%	94
	TP10-0	SE256527.015	%	60 - 130%	93
	TP10-0.4	SE256527.016	%	60 - 130%	93
	TP12-0	SE256527.017	%	60 - 130%	101
	TP13-0	SE256527.018	%	60 - 130%	85
	TP14-0	SE256527.019	%	60 - 130%	93
	TP15-0	SE256527.020	%	60 - 130%	71
	TP16-0	SE256527.021	%	60 - 130%	86
	TP17-0	SE256527.022	%	60 - 130%	96
	TP7-1.6	SE256527.023	%	60 - 130%	75
	TP18-0	SE256527.024	%	60 - 130%	96
	TP18-0.4	SE256527.025	%	60 - 130%	97
	TP19-0	SE256527.026	%	60 - 130%	96
	TP20-0	SE256527.027	%	60 - 130%	94
	TP21-0	SE256527.029	%	60 - 130%	79
	TP22-0	SE256527.030	%	60 - 130%	96
	TP22-0.5	SE256527.031	%	60 - 130%	88
	TP23-0	SE256527.032	%	60 - 130%	83
	TP24-0	SE256527.033	%	60 - 130%	88
	TP25-0	SE256527.034	%	60 - 130%	81
	TP26-0	SE256527.035	%	60 - 130%	86
	TP7-0	SE256527.036	%	60 - 130%	86
	QC1	SE256527.037	%	60 - 130%	88
	QC2	SE256527.038	%	60 - 130%	94
	Trip Blank	SE256527.039	%	60 - 130%	89
	Trip Spike	SE256527.040	%	60 - 130%	86
d4-1,2-dichloroethane (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	79
	SP1-3	SE256527.003	%	60 - 130%	80
	TP1-0	SE256527.004	%	60 - 130%	80
	TP1-0.4	SE256527.005	%	60 - 130%	86
	TP1-0.6	SE256527.006	%	60 - 130%	88
	TP2-0	SE256527.007	%	60 - 130%	77

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP2-0.6	SE256527.008	%	60 - 130%	84
	TP5-0	SE256527.009	%	60 - 130%	84
	TP5-1	SE256527.010	%	60 - 130%	86
	TP6-0	SE256527.011	%	60 - 130%	82
	TP6-1	SE256527.012	%	60 - 130%	74
	TP7-0	SE256527.013	%	60 - 130%	76
	TP8-0	SE256527.014	%	60 - 130%	74
	TP10-0	SE256527.015	%	60 - 130%	76
	TP10-0.4	SE256527.016	%	60 - 130%	74
	TP12-0	SE256527.017	%	60 - 130%	81
	TP13-0	SE256527.018	%	60 - 130%	78
	TP14-0	SE256527.019	%	60 - 130%	79
	TP15-0	SE256527.020	%	60 - 130%	83
	TP16-0	SE256527.021	%	60 - 130%	81
	TP17-0	SE256527.022	%	60 - 130%	87
	TP7-1.6	SE256527.023	%	60 - 130%	72
	TP18-0	SE256527.024	%	60 - 130%	111
	TP18-0.4	SE256527.025	%	60 - 130%	113
	TP19-0	SE256527.026	%	60 - 130%	115
	TP20-0	SE256527.027	%	60 - 130%	109
	TP21-0	SE256527.029	%	60 - 130%	94
	TP22-0	SE256527.030	%	60 - 130%	109
	TP22-0.5	SE256527.031	%	60 - 130%	107
	TP23-0	SE256527.032	%	60 - 130%	83
	TP24-0	SE256527.033	%	60 - 130%	83
	TP25-0	SE256527.034	%	60 - 130%	97
	TP26-0	SE256527.035	%	60 - 130%	96
	TP7-0	SE256527.036	%	60 - 130%	103
	QC1	SE256527.037	%	60 - 130%	92
	QC2	SE256527.038	%	60 - 130%	111
	Trip Blank	SE256527.039	%	60 - 130%	91
	Trip Spike	SE256527.040	%	60 - 130%	94
d8-toluene (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	75
	SP1-3	SE256527.003	%	60 - 130%	81
	TP1-0	SE256527.004	%	60 - 130%	84
	TP1-0.4	SE256527.005	%	60 - 130%	82
	TP1-0.6	SE256527.006	%	60 - 130%	95
	TP2-0	SE256527.007	%	60 - 130%	70
	TP2-0.6	SE256527.008	%	60 - 130%	88
	TP5-0	SE256527.009	%	60 - 130%	91
	TP5-1	SE256527.010	%	60 - 130%	84
	TP6-0	SE256527.011	%	60 - 130%	101
	TP6-1	SE256527.012	%	60 - 130%	96
	TP7-0	SE256527.013	%	60 - 130%	99
	TP8-0	SE256527.014	%	60 - 130%	95
	TP10-0	SE256527.015	%	60 - 130%	91
	TP10-0.4	SE256527.016	%	60 - 130%	96
	TP12-0	SE256527.017	%	60 - 130%	100
	TP13-0	SE256527.018	%	60 - 130%	85
	TP14-0	SE256527.019	%	60 - 130%	92
	TP15-0	SE256527.020	%	60 - 130%	75
	TP16-0	SE256527.021	%	60 - 130%	86
	TP17-0	SE256527.022	%	60 - 130%	93
	TP7-1.6	SE256527.023	%	60 - 130%	73
	TP18-0	SE256527.024	%	60 - 130%	95
	TP18-0.4	SE256527.025	%	60 - 130%	97
	TP19-0	SE256527.026	%	60 - 130%	98
	TP20-0	SE256527.027	%	60 - 130%	95
	TP21-0	SE256527.029	%	60 - 130%	84
	TP22-0	SE256527.030	%	60 - 130%	94

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	TP22-0.5	SE256527.031	%	60 - 130%	90
	TP23-0	SE256527.032	%	60 - 130%	81
	TP24-0	SE256527.033	%	60 - 130%	87
	TP25-0	SE256527.034	%	60 - 130%	88
	TP26-0	SE256527.035	%	60 - 130%	83
	TP7-0	SE256527.036	%	60 - 130%	93
	QC1	SE256527.037	%	60 - 130%	79
	QC2	SE256527.038	%	60 - 130%	94
	Trip Blank	SE256527.039	%	60 - 130%	99
	Trip Spike	SE256527.040	%	60 - 130%	100

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	80
	SP1-3	SE256527.003	%	60 - 130%	80
	TP1-0	SE256527.004	%	60 - 130%	86
	TP1-0.4	SE256527.005	%	60 - 130%	86
	TP1-0.6	SE256527.006	%	60 - 130%	90
	TP2-0	SE256527.007	%	60 - 130%	76
	TP2-0.6	SE256527.008	%	60 - 130%	86
	TP5-0	SE256527.009	%	60 - 130%	93
	TP5-1	SE256527.010	%	60 - 130%	109
	TP6-0	SE256527.011	%	60 - 130%	129
	TP6-1	SE256527.012	%	60 - 130%	98
	TP7-0	SE256527.013	%	60 - 130%	101
	TP8-0	SE256527.014	%	60 - 130%	94
	TP10-0	SE256527.015	%	60 - 130%	93
	TP10-0.4	SE256527.016	%	60 - 130%	93
	TP12-0	SE256527.017	%	60 - 130%	101
	TP13-0	SE256527.018	%	60 - 130%	85
	TP14-0	SE256527.019	%	60 - 130%	93
	TP15-0	SE256527.020	%	60 - 130%	71
	TP16-0	SE256527.021	%	60 - 130%	86
	TP17-0	SE256527.022	%	60 - 130%	96
	TP7-1.6	SE256527.023	%	60 - 130%	75
	TP18-0	SE256527.024	%	60 - 130%	96
	TP18-0.4	SE256527.025	%	60 - 130%	97
	TP19-0	SE256527.026	%	60 - 130%	96
	TP20-0	SE256527.027	%	60 - 130%	94
	TP21-0	SE256527.029	%	60 - 130%	79
	TP22-0	SE256527.030	%	60 - 130%	96
	TP22-0.5	SE256527.031	%	60 - 130%	88
	TP23-0	SE256527.032	%	60 - 130%	83
	TP24-0	SE256527.033	%	60 - 130%	88
	TP25-0	SE256527.034	%	60 - 130%	81
	TP26-0	SE256527.035	%	60 - 130%	86
	TP7-0	SE256527.036	%	60 - 130%	86
	QC1	SE256527.037	%	60 - 130%	88
	QC2	SE256527.038	%	60 - 130%	94
d4-1,2-dichloroethane (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	79
	SP1-3	SE256527.003	%	60 - 130%	80
	TP1-0	SE256527.004	%	60 - 130%	80
	TP1-0.4	SE256527.005	%	60 - 130%	86
	TP1-0.6	SE256527.006	%	60 - 130%	88
	TP2-0	SE256527.007	%	60 - 130%	77
	TP2-0.6	SE256527.008	%	60 - 130%	84
	TP5-0	SE256527.009	%	60 - 130%	84
	TP5-1	SE256527.010	%	60 - 130%	86
	TP6-0	SE256527.011	%	60 - 130%	82

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP6-1	SE256527.012	%	60 - 130%	74
	TP7-0	SE256527.013	%	60 - 130%	76
	TP8-0	SE256527.014	%	60 - 130%	74
	TP10-0	SE256527.015	%	60 - 130%	76
	TP10-0.4	SE256527.016	%	60 - 130%	74
	TP12-0	SE256527.017	%	60 - 130%	81
	TP13-0	SE256527.018	%	60 - 130%	78
	TP14-0	SE256527.019	%	60 - 130%	79
	TP15-0	SE256527.020	%	60 - 130%	83
	TP16-0	SE256527.021	%	60 - 130%	81
	TP17-0	SE256527.022	%	60 - 130%	87
	TP7-1.6	SE256527.023	%	60 - 130%	72
	TP18-0	SE256527.024	%	60 - 130%	111
	TP18-0.4	SE256527.025	%	60 - 130%	113
	TP19-0	SE256527.026	%	60 - 130%	115
	TP20-0	SE256527.027	%	60 - 130%	109
	TP21-0	SE256527.029	%	60 - 130%	94
	TP22-0	SE256527.030	%	60 - 130%	109
	TP22-0.5	SE256527.031	%	60 - 130%	107
	TP23-0	SE256527.032	%	60 - 130%	83
	TP24-0	SE256527.033	%	60 - 130%	83
	TP25-0	SE256527.034	%	60 - 130%	97
	TP26-0	SE256527.035	%	60 - 130%	96
	TP7-0	SE256527.036	%	60 - 130%	103
	QC1	SE256527.037	%	60 - 130%	92
	QC2	SE256527.038	%	60 - 130%	111
d8-toluene (Surrogate)	SP1-1	SE256527.001	%	60 - 130%	78
	SP1-2	SE256527.002	%	60 - 130%	75
	SP1-3	SE256527.003	%	60 - 130%	81
	TP1-0	SE256527.004	%	60 - 130%	84
	TP1-0.4	SE256527.005	%	60 - 130%	82
	TP1-0.6	SE256527.006	%	60 - 130%	95
	TP2-0	SE256527.007	%	60 - 130%	70
	TP2-0.6	SE256527.008	%	60 - 130%	88
	TP5-0	SE256527.009	%	60 - 130%	91
	TP5-1	SE256527.010	%	60 - 130%	84
	TP6-0	SE256527.011	%	60 - 130%	101
	TP6-1	SE256527.012	%	60 - 130%	96
	TP7-0	SE256527.013	%	60 - 130%	99
	TP8-0	SE256527.014	%	60 - 130%	95
	TP10-0	SE256527.015	%	60 - 130%	91
	TP10-0.4	SE256527.016	%	60 - 130%	96
	TP12-0	SE256527.017	%	60 - 130%	100
	TP13-0	SE256527.018	%	60 - 130%	85
	TP14-0	SE256527.019	%	60 - 130%	92
	TP15-0	SE256527.020	%	60 - 130%	75
	TP16-0	SE256527.021	%	60 - 130%	86
	TP17-0	SE256527.022	%	60 - 130%	93
	TP7-1.6	SE256527.023	%	60 - 130%	73
	TP18-0	SE256527.024	%	60 - 130%	95
	TP18-0.4	SE256527.025	%	60 - 130%	97
	TP19-0	SE256527.026	%	60 - 130%	98
	TP20-0	SE256527.027	%	60 - 130%	95
	TP21-0	SE256527.029	%	60 - 130%	84
	TP22-0	SE256527.030	%	60 - 130%	94
	TP22-0.5	SE256527.031	%	60 - 130%	90
	TP23-0	SE256527.032	%	60 - 130%	81
	TP24-0	SE256527.033	%	60 - 130%	87
	TP25-0	SE256527.034	%	60 - 130%	88
	TP26-0	SE256527.035	%	60 - 130%	83
	TP7-0	SE256527.036	%	60 - 130%	93

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	QC1	SE256527.037	%	60 - 130%	79
	QC2	SE256527.038	%	60 - 130%	94

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result
LB297043.001	Exchangeable Sodium, Na	mg/kg	2	0.7846
	Exchangeable Potassium, K	mg/kg	2	-0.0063
	Exchangeable Calcium, Ca	mg/kg	2	-0.792
	Exchangeable Magnesium, Mg	mg/kg	2	-0.0793

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB296714.001	Mercury	mg/kg	0.05	<0.05
LB296715.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB296623.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB296624.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	101
		2-fluorobiphenyl (Surrogate)	%	-	97
		d14-p-terphenyl (Surrogate)	%	-	102
LB296625.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB296625.001		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	124
		2-fluorobiphenyl (Surrogate)	%	-	107
		d14-p-terphenyl (Surrogate)	%	-	111

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB296623.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	91

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB296620.001		Phenol	mg/kg	0.5	<0.5
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
		2-chlorophenol	mg/kg	0.5	<0.5
		2,4-dimethylphenol	mg/kg	0.5	<0.5
		2,6-dichlorophenol	mg/kg	0.5	<0.5
		2,4-dichlorophenol	mg/kg	0.5	<0.5
		4-chloro-3-methylphenol	mg/kg	2	<2
		2,4,6-trichlorophenol	mg/kg	0.5	<0.5
		2-nitrophenol	mg/kg	0.5	<0.5
		4-nitrophenol	mg/kg	1	<1
		2,4,5-trichlorophenol	mg/kg	0.5	<0.5
		2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
		Pentachlorophenol	mg/kg	0.5	<0.5
		2,4-dinitrophenol	mg/kg	2	<2
	Surrogates	2,4,6-Tribromophenol (Surrogate)	%	-	115
		d5-phenol (Surrogate)	%	-	81

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB296702.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB296703.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB296624.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB296625.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB296661.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Iodomethane	mg/kg	5	<5
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB296661.001	Halogenated Aromatics	1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		o-xylene	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate*	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	90
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total BTEX*	mg/kg	0.6	<0.6
	Trihalomethanes	Chloroform (THM)	mg/kg	0.1	<0.1
		Bromodichloromethane (THM)	mg/kg	0.1	<0.1
		Dibromochloromethane (THM)	mg/kg	0.1	<0.1
		Bromoform (THM)	mg/kg	0.1	<0.1
LB296662.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Iodomethane	mg/kg	5	<5
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB296662.001	Halogenated Aliphatics	Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		o-xylene	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate*	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	119
		d8-toluene (Surrogate)	%	-	102
		Bromofluorobenzene (Surrogate)	%	-	103
	Totals	Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total BTEX*	mg/kg	0.6	<0.6
	Trihalomethanes	Chloroform (THM)	mg/kg	0.1	<0.1
		Bromodichloromethane (THM)	mg/kg	0.1	<0.1
		Dibromochloromethane (THM)	mg/kg	0.1	<0.1
		Bromoform (THM)	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB296661.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	90
LB296662.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	119

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296714.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE256527.019	LB296714.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE256527.030	LB296715.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE256527.038	LB296715.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296683.011	% Moisture	%w/w	1	15.9	16.9	36	6
SE256527.019	LB296683.021	% Moisture	%w/w	1	9.2	8.8	41	5
SE256527.030	LB296684.011	% Moisture	%w/w	1	7.7	7.2	43	6
SE256527.038	LB296684.020	% Moisture	%w/w	1	13.5	16.8	37	22

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.002	LB296623.004	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296624.014	Naphthalene	mg/kg	0.1	0.2	0.1	93	38
		2-methylnaphthalene	mg/kg	0.1	1.2	0.8	40	46 ②
		1-methylnaphthalene	mg/kg	0.1	3.6	2.1	34	51 ②
		Acenaphthylene	mg/kg	0.1	0.2	0.1	82	49
		Acenaphthene	mg/kg	0.1	0.4	0.3	59	21
		Fluorene	mg/kg	0.1	1.4	0.9	39	49 ②
		Phenanthrene	mg/kg	0.1	1.7	1.1	37	44 ②
		Anthracene	mg/kg	0.1	0.4	0.3	58	42
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	0.3	0.2	79	53
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — **Method: ME-(AU)-[ENV]AN420**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296624.014		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	9.4	5.8	31	47 ②
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	30	5
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE256527.019	LB296624.024		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	190	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.2	0.2	88	22
			Anthracene	mg/kg	0.1	<0.1	<0.1	170	0
			Fluoranthene	mg/kg	0.1	0.6	0.5	49	8
			Pyrene	mg/kg	0.1	0.6	0.5	49	10
			Benzo(a)anthracene	mg/kg	0.1	<0.1	0.2	101	68
			Chrysene	mg/kg	0.1	0.3	0.3	65	11
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.5	0.5	50	14
			Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.2	83	12
			Benzo(a)pyrene	mg/kg	0.1	0.4	0.4	56	14
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.4	0.4	55	14
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	196	0
			Benzo(ghi)perylene	mg/kg	0.1	0.5	0.4	54	13
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	0.5	0.5	49	9
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.6	0.5	46	9
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	0.6	0.6	59	9
			Total PAH (18)	mg/kg	0.8	3.6	3.4	33	6
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE256527.030	LB296625.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	0.2	0.2	85	12
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	186	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	164	0
			Phenanthrene	mg/kg	0.1	0.8	1.1	41	27
			Anthracene	mg/kg	0.1	0.3	0.4	61	27
			Fluoranthene	mg/kg	0.1	1.9	2.6	34	30
			Pyrene	mg/kg	0.1	1.9	2.5	35	28
			Benzo(a)anthracene	mg/kg	0.1	0.8	1.0	41	26
			Chrysene	mg/kg	0.1	0.8	1.0	41	23
			Benzo(b&j)fluoranthene	mg/kg	0.1	1.4	1.7	37	21
			Benzo(k)fluoranthene	mg/kg	0.1	0.5	0.6	47	22
			Benzo(a)pyrene	mg/kg	0.1	1.3	1.5	37	20
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	1.2	1.4	38	13
			Dibenzo(ah)anthracene	mg/kg	0.1	0.1	0.2	92	13
			Benzo(ghi)perylene	mg/kg	0.1	1.5	1.6	36	11
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	1.8	2.2	20	19
				TEQ (mg/kg)	0.2	1.8	2.2	20	19
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	1.8	2.2	20	19
				TEQ (mg/kg)	0.2	1.8	2.2	20	19
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	1.8	2.2	25	19
				TEQ (mg/kg)	0.3	1.8	2.2	25	19
			Total PAH (18)	mg/kg	0.8	13	16	31	22
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	30	2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.030	LB296625.014	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
SE256527.038	LB296625.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.1	0.1	112	26
			Pyrene	mg/kg	0.1	0.1	0.1	106	22
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	168	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	<0.1	127	14
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	147	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.1	<0.1	127	18
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.1	103	34
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	170	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	133	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	52	50
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	30	1

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.002	LB296623.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	2

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.033	LB296908.017	pH	pH Units	0.1	7.5	7.3	31	2
SE256532.003	LB296908.016	pH	pH Units	0.1	5.3	5.3	32	1

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296620.026	Phenol	mg/kg	0.5	<0.5	<0.5	200	0
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
		Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
		2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
		2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
		2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
		2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
		4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
		2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
		2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
		4-nitrophenol	mg/kg	1	<1	<1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Speciated Phenols in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296620.026		2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.8	4.5	30	5
			d5-phenol (Surrogate)	mg/kg	-	1.9	1.9	30	1
SE256536.010	LB296620.014		Phenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.0	4.0	30	0
			d5-phenol (Surrogate)	mg/kg	-	1.8	1.8	30	1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296702.014	Arsenic, As	mg/kg	1	3	5	54	48
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.0	4.6	42	14
		Copper, Cu	mg/kg	0.5	6.1	5.7	38	5
		Nickel, Ni	mg/kg	0.5	1.1	1.2	74	10
		Lead, Pb	mg/kg	1	12	13	38	11
		Zinc, Zn	mg/kg	2	37	37	35	1
SE256527.019	LB296702.024	Arsenic, As	mg/kg	1	3	3	64	26
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	5.8	9.5	37	48 ②
		Copper, Cu	mg/kg	0.5	10	12	35	11
		Nickel, Ni	mg/kg	0.5	2.4	3.3	48	32
		Lead, Pb	mg/kg	1	92	120	31	25
		Zinc, Zn	mg/kg	2	39	54	34	31
SE256527.030	LB296703.014	Arsenic, As	mg/kg	1	3	4	58	14
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.8	12	35	52 ②
		Copper, Cu	mg/kg	0.5	5.9	7.3	38	21
		Nickel, Ni	mg/kg	0.5	3.0	2.8	47	4
		Lead, Pb	mg/kg	1	31	34	33	8
		Zinc, Zn	mg/kg	2	44	42	35	4
SE256527.038	LB296703.023	Arsenic, As	mg/kg	1	3	4	60	47
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.0	13	35	72 ②
		Copper, Cu	mg/kg	0.5	8.7	9.1	36	4
		Nickel, Ni	mg/kg	0.5	2.8	6.2	41	75 ②
		Lead, Pb	mg/kg	1	12	13	38	7
		Zinc, Zn	mg/kg	2	67	72	33	7

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296624.014	TRH C10-C14	mg/kg	20	840	510	33	50 ②
		TRH C15-C28	mg/kg	45	1000	600	36	50 ②
		TRH C29-C36	mg/kg	45	<45	<45	200	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296624.014		TRH C10-C36 Total	mg/kg	110	1800	1100	37	50 ②
			TRH >C10-C40 Total (F bands)	mg/kg	210	1800	1100	44	50 ②
		TRH F Bands	TRH >C10-C16	mg/kg	25	1100	660	33	50 ②
			TRH >C16-C34 (F3)	mg/kg	90	740	440	45	50 ②
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE256527.019	LB296624.024		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE256527.030	LB296625.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	71	59	99	17
			TRH C29-C36	mg/kg	45	130	67	75	67
			TRH C37-C40	mg/kg	100	<100	<100	177	0
			TRH C10-C36 Total	mg/kg	110	210	130	96	48
			TRH >C10-C40 Total (F bands)	mg/kg	210	300	<210	134	35
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	150	100	101	39
			TRH >C34-C40 (F4)	mg/kg	120	150	<120	143	22
SE256527.038	LB296625.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	64	47	111	30
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	184	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296661.014	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	200	0
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromomethane	mg/kg	1	<1	<1	200	0
			Chloroethane	mg/kg	1	<1	<1	200	0
			Trichlorofluoromethane	mg/kg	1	<1	<1	200	0
			1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Iodomethane	mg/kg	5	<5	<5	200	0
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	200	0
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296661.014	Halogenated Aliphatics	Dibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
			2-nitropropane	mg/kg	10	<10	<10	200	0
		Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
			MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	200	0
			Vinyl acetate*	mg/kg	10	<10	<10	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	200	0
			2-hexanone (MBK)	mg/kg	5	<5	<5	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	154	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.7	50	12
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.8	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.9	12.4	50	13
		Totals	Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	200	0
			Total VOC*	mg/kg	24	<24	<24	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
		Trihalomethanes	Chloroform (THM)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromodichloromethane (THM)	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromochloromethane (THM)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromoform (THM)	mg/kg	0.1	<0.1	<0.1	200	0
SE256527.019	LB296661.024	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.019	LB296661.024	Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	8.7	50	10
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.8	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.9	50	6
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE256527.030	LB296662.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	12.0	50	10
			d8-toluene (Surrogate)	mg/kg	-	9.4	10.2	50	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	10.2	50	6
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE256527.033	LB296662.029	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	200	0
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromomethane	mg/kg	1	<1	<1	200	0
			Chloroethane	mg/kg	1	<1	<1	200	0
			Trichlorofluoromethane	mg/kg	1	<1	<1	200	0
			1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Iodomethane	mg/kg	5	<5	<5	200	0
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	200	0
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.033	LB296662.029	Monocyclic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
		Compounds	2-nitropropane	mg/kg	10	<10	<10	200	0
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	200	0
			Vinyl acetate*	mg/kg	10	<10	<10	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	200	0
			2-hexanone (MBK)	mg/kg	5	<5	<5	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	8.8	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.2	50	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	9.3	50	5
		Totals	Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	200	0
			Total VOC*	mg/kg	24	<24	<24	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
		Trihalomethan	Chloroform (THM)	mg/kg	0.1	<0.1	<0.1	200	0
		es	Bromodichloromethane (THM)	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromochloromethane (THM)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromoform (THM)	mg/kg	0.1	<0.1	<0.1	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.010	LB296661.014		TRH C6-C10	mg/kg	25	84	92	58	10
			TRH C6-C9	mg/kg	20	61	60	63	1
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.7	50	12
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.8	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.9	12.4	50	13
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	84	92	58	10
SE256527.019	LB296661.024		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	8.7	50	10
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.8	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.9	50	6
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE256527.030	LB296662.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	12.0	50	10
			d8-toluene (Surrogate)	mg/kg	-	9.4	10.2	50	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	10.2	50	6
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE256527.033	LB296662.027		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Soil (continued) **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE256527.033	LB296662.027	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	8.8	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.2	50	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	9.3	50	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB297043.002	Exchangeable Sodium, Na	meq/100g	0.01	0.18	0.194	80 - 120	95
	Exchangeable Potassium, K	meq/100g	0.01	0.59	0.63	80 - 120	94
	Exchangeable Calcium, Ca	meq/100g	0.01	5.6	6.3	80 - 120	89
	Exchangeable Magnesium, Mg	meq/100g	0.02	0.98	1.11	80 - 120	88

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296714.002	Mercury	mg/kg	0.05	0.19	0.2	80 - 120	93
LB296715.002	Mercury	mg/kg	0.05	0.20	0.2	80 - 120	99

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296623.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	92
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	97
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	98
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	101
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	104
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	81
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	95

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296624.002		Naphthalene	mg/kg	0.1	3.5	4	60 - 140	87
		Acenaphthylene	mg/kg	0.1	3.5	4	60 - 140	86
		Acenaphthene	mg/kg	0.1	3.6	4	60 - 140	91
		Phenanthrene	mg/kg	0.1	3.5	4	60 - 140	89
		Anthracene	mg/kg	0.1	3.5	4	60 - 140	87
		Fluoranthene	mg/kg	0.1	3.4	4	60 - 140	84
		Pyrene	mg/kg	0.1	3.6	4	60 - 140	89
		Benzo(a)pyrene	mg/kg	0.1	3.5	4	60 - 140	89
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	99
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98
LB296625.002		Naphthalene	mg/kg	0.1	3.4	4	60 - 140	84
		Acenaphthylene	mg/kg	0.1	3.4	4	60 - 140	85
		Acenaphthene	mg/kg	0.1	3.6	4	60 - 140	89
		Phenanthrene	mg/kg	0.1	3.5	4	60 - 140	87
		Anthracene	mg/kg	0.1	3.5	4	60 - 140	88
		Fluoranthene	mg/kg	0.1	3.3	4	60 - 140	83
		Pyrene	mg/kg	0.1	3.7	4	60 - 140	93
		Benzo(a)pyrene	mg/kg	0.1	3.5	4	60 - 140	88
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	108
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	118

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296623.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	96

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296908.003	pH	pH Units	0.1	7.4	7.415	98 - 102	99

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296620.002	Phenol	mg/kg	0.5	0.9	1	70 - 130	90
	2,4-dichlorophenol	mg/kg	0.5	0.8	1	70 - 130	82
	2,4,6-trichlorophenol	mg/kg	0.5	0.8	1	70 - 130	76
	Pentachlorophenol	mg/kg	0.5	1.0	1	70 - 130	104

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Speciated Phenols in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296620.002	Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.5	5	40 - 130	109
		d5-phenol (Surrogate)	mg/kg	-	1.6	2	40 - 130	80

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296702.002		Arsenic, As	mg/kg	1	350	318.22	80 - 120	111
		Cadmium, Cd	mg/kg	0.3	3.9	4.81	70 - 130	81
		Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
		Copper, Cu	mg/kg	0.5	320	290	80 - 120	112
		Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
		Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
		Zinc, Zn	mg/kg	2	290	273	80 - 120	106
LB296703.002		Arsenic, As	mg/kg	1	340	318.22	80 - 120	107
		Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	85
		Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	102
		Copper, Cu	mg/kg	0.5	330	290	80 - 120	113
		Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
		Lead, Pb	mg/kg	1	96	89.9	80 - 120	107
		Zinc, Zn	mg/kg	2	290	273	80 - 120	107

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296624.002		TRH C10-C14	mg/kg	20	32	40	60 - 140	80
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	82
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	98
	TRH F Bands	TRH >C10-C16	mg/kg	25	33	40	60 - 140	82
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	89
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	102
LB296625.002		TRH C10-C14	mg/kg	20	45	40	60 - 140	111
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	98
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	75
	TRH F Bands	TRH >C10-C16	mg/kg	25	45	40	60 - 140	112
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	80
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	78

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296661.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	3.3	5	60 - 140	67
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	4.9	5	60 - 140	99
		Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	4.6	5	60 - 140	92
	Halogenated	Chlorobenzene	mg/kg	0.1	5.6	5	60 - 140	113
	Monocyclic	Benzene	mg/kg	0.1	4.6	5	60 - 140	92
	Aromatic	Toluene	mg/kg	0.1	4.6	5	60 - 140	91
		Ethylbenzene	mg/kg	0.1	4.7	5	60 - 140	94
		m/p-xylene	mg/kg	0.2	9.5	10	60 - 140	95
		o-xylene	mg/kg	0.1	4.7	5	60 - 140	94
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	10	70 - 130	94
		d8-toluene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	Trihalomethan	Chloroform (THM)	mg/kg	0.1	5.3	5	60 - 140	105
LB296662.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	3.5	5	60 - 140	69
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	5.1	5	60 - 140	102
		Trichloroethene (Trichloroethylene,TCE)	mg/kg	0.1	4.8	5	60 - 140	96
	Halogenated	Chlorobenzene	mg/kg	0.1	5.5	5	60 - 140	111
	Monocyclic	Benzene	mg/kg	0.1	4.5	5	60 - 140	90
	Aromatic	Toluene	mg/kg	0.1	4.7	5	60 - 140	94
		Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	88
		m/p-xylene	mg/kg	0.2	9.2	10	60 - 140	92
		o-xylene	mg/kg	0.1	4.7	5	60 - 140	93
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	10	70 - 130	94
		d8-toluene (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.2	10	70 - 130	112

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296662.002	Trihalomethan	Chloroform (THM)	mg/kg	0.1	5.4	5	60 - 140	108

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB296661.002		TRH C6-C10	mg/kg	25	89	92.5	60 - 140	96
		TRH C6-C9	mg/kg	20	78	80	60 - 140	97
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	61	62.5	60 - 140	97
LB296662.002		TRH C6-C10	mg/kg	25	68	92.5	60 - 140	74
		TRH C6-C9	mg/kg	20	63	80	60 - 140	78
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.2	10	70 - 130	112
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	41	62.5	60 - 140	66

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296714.004	Mercury	mg/kg	0.05	0.20	<0.05	0.2	97
SE256527.020	LB296715.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	101

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296624.004		Naphthalene	mg/kg	0.1	4.2	<0.1	4	105
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.3	<0.1	4	106
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.3	<0.1	4	106
			Anthracene	mg/kg	0.1	4.2	<0.1	4	104
			Fluoranthene	mg/kg	0.1	4.2	0.2	4	101
			Pyrene	mg/kg	0.1	4.3	0.2	4	104
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.5	0.1	4	109
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.1	0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.6	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	102
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	100
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	95
SE256527.020	LB296625.004		Naphthalene	mg/kg	0.1	3.5	<0.1	4	85
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	3.5	<0.1	4	84
			Acenaphthene	mg/kg	0.1	3.7	<0.1	4	90
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	3.6	0.1	4	86
			Anthracene	mg/kg	0.1	3.6	<0.1	4	88
			Fluoranthene	mg/kg	0.1	3.5	0.1	4	83
			Pyrene	mg/kg	0.1	3.8	0.2	4	91
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.6	0.1	4	87
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.6	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	3.7	0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	3.8	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	29	0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	-	126
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	107
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	-	115

Speciated Phenols in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256536.001	LB296620.004		Phenol	mg/kg	0.5	0.7	<0.5	1	70
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	-	-
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	-	-
			Total Cresol	mg/kg	1.5	<1.5	<1.5	-	-
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dichlorophenol	mg/kg	0.5	0.7	<0.5	1	74
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	-	-
			2,4,6-trichlorophenol	mg/kg	0.5	0.7	<0.5	1	70
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	-	-
			4-nitrophenol	mg/kg	1	<1	<1	-	-
			2,4,5-trichlorophenol	mg/kg	0.5	0.5	<0.5	-	-
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	-	-
			Pentachlorophenol	mg/kg	0.5	0.7	<0.5	1	70
			2,4-dinitrophenol	mg/kg	2	<2	<2	-	-
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.2	3.9	-	84
			d5-phenol (Surrogate)	mg/kg	-	1.7	1.4	-	87

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296702.004	Arsenic, As	mg/kg	1	46	4	50	84
		Cadmium, Cd	mg/kg	0.3	41	<0.3	50	81
		Chromium, Cr	mg/kg	0.5	51	7.9	50	85
		Copper, Cu	mg/kg	0.5	52	9.1	50	86
		Nickel, Ni	mg/kg	0.5	44	3.9	50	81
		Lead, Pb	mg/kg	1	50	12	50	77
		Zinc, Zn	mg/kg	2	98	67	50	60 ④
SE256527.020	LB296703.004	Arsenic, As	mg/kg	1	48	3	50	89
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	86
		Chromium, Cr	mg/kg	0.5	53	31	50	44 ④
		Copper, Cu	mg/kg	0.5	56	9.8	50	93
		Nickel, Ni	mg/kg	0.5	48	4.1	50	89
		Lead, Pb	mg/kg	1	73	29	50	87
		Zinc, Zn	mg/kg	2	140	86	50	109

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296624.004		TRH C10-C14	mg/kg	20	49	<20	40	119
			TRH C15-C28	mg/kg	45	130	<45	40	322 ⑨
			TRH C29-C36	mg/kg	45	78	<45	40	125
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	260	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	51	<25	40	125
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	51	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	160	<90	40	336 ⑨
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE256527.020	LB296625.004		TRH C10-C14	mg/kg	20	50	<20	40	121
			TRH C15-C28	mg/kg	45	52	<45	40	103
			TRH C29-C36	mg/kg	45	87	<45	40	114
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	190	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	50	<25	40	121
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	50	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	94
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296661.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.5	<0.1	5	90
			Toluene	mg/kg	0.1	4.7	<0.1	5	94
			Ethylbenzene	mg/kg	0.1	4.6	<0.1	5	92
			m/p-xylene	mg/kg	0.2	9.2	<0.2	10	92
			o-xylene	mg/kg	0.1	4.7	<0.1	5	93
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	7.8	10	77
			d8-toluene (Surrogate)	mg/kg	-	7.7	7.8	10	77
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	7.8	10	76
		Totals	Total BTEX*	mg/kg	0.6	28	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	14	<0.3	-	-
SE256527.020	LB296662.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.8	<0.1	5	95
			Toluene	mg/kg	0.1	5.0	<0.1	5	100
			Ethylbenzene	mg/kg	0.1	4.6	<0.1	5	93
			m/p-xylene	mg/kg	0.2	9.7	<0.2	10	97
			o-xylene	mg/kg	0.1	4.9	<0.1	5	98
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	8.3	10	95
			d8-toluene (Surrogate)	mg/kg	-	8.9	7.5	10	89
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.4	7.1	10	114
		Totals	Total BTEX*	mg/kg	0.6	29	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	15	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE256527.001	LB296661.004		TRH C6-C10	mg/kg	25	84	<25	92.5	91
			TRH C6-C9	mg/kg	20	74	<20	80	93
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	7.8	10	77
			d8-toluene (Surrogate)	mg/kg	-	7.7	7.8	10	77
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	7.8	-	76
		VPH F Bands	Benzene (F0)	mg/kg	0.1	4.5	<0.1	-	-
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	56	<25	62.5	90
SE256527.020	LB296662.004		TRH C6-C10	mg/kg	25	74	<25	92.5	79
			TRH C6-C9	mg/kg	20	64	<20	80	79
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	8.3	10	95
			d8-toluene (Surrogate)	mg/kg	-	8.9	7.5	10	89
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.4	7.1	-	114
		VPH F Bands	Benzene (F0)	mg/kg	0.1	4.8	<0.1	-	-
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	44	<25	62.5	70

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

ANALYTICAL REPORT

Accreditation No. 2562

[redacted]

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam on 17/11/2023

[redacted]

ANALYTICAL REPORT

SE256527 R0

RESULTS

Fibre ID in bulk materials — Method AN602/AS4964

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE256527.028	TP20-0.7	Other	30x20x4mm Cement Sheet Fragment	07 Nov 2023	Chrysotile Asbestos Detected	

METHOD SUMMARY

SE256527 R0

METHOD	METHODOLOGY SUMMARY
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

ENVIRONMENTS

CHAIN OF CUSTODY & ANALYSIS REQUEST

Sample Date: 15/12/23

Company Name:	JM Environments	Project Name/No:	JME21073
Address:	37 Tooke St	Purchase Order No:	JME21073
	COOKS HILL NSW 2300	Results Required By:	
Contact Name:	[redacted]	Email:	[redacted]
Telephone	[redacted]	Email:	admin@jmenvironments.com

Relinquished by:	Date /Time:	Received by: Lewis SGS Newcastle	Date /Time: 18-12-23 9:05
Relinquished by:	Date /Time:	Received by: G.F	Date /Time: 19/12/23 10:30
Samples intact: Yes/No	Temperature:	Sample Cooler Sealed: Yes/No	Laboratory Quotation:

Lab Sample ID	Sample ID	Water	Soil	Other	Preservative	No. of Containers		pH/CEC	BTEX/TPH/ PAH/ 8HM	8HM	OCP/PCB	Asbestos	Chromium Suite*		Comments
1	MW2	X				X			X						
2	MW3	X				X			X						
3	MW4	X				X			X						
4	QC1	X				X			X						

SGS EHS Sydney COC
SE258401

* Please report all parameters

Cooling Method	SE258401	Matrix	Containers Supplied	Storage Location	250	125	BA	125 / 250 ST	250 / 500 Zn	250 / 500 NaOH/	1L U	500 U	125 U	250 U	125 / 250 M	125 / 250 Met	125 H	500 / 1L H_2	125 / 250 F	500 /	100 / 200	40 $NaNO_3$	40 UP	500 NaThio	10 Tu	Digit	70 PF	Cov	Comm
CP																												
Temp, °C	1-2	Water	SG5	W175									1							1		2						
20.2	3	"	"	W175									1							1		3						
Good Order	4	"	"	W175									1							1		1						
(Y) / N																												
Clearly Labelled																												
(Y) / N																												
Correct Pres.																												
(Y) / N																												
No Head-space																												
(Y) / N / NA																												
Sufficient Vol																												
(Y) / N																												
Sample IDs Checked by:																												
G.F																												

SAMPLE RECEIPT ADVICE

SE258401

[redacted]

This is to confirm that 4 samples were received on Tuesday 19/12/2023. Results are expected to be ready by COB Thursday 28/12/2023.
Please quote SGS reference SE258401 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	4 Water	Type of documentation received	COC
Date documentation received	19/12/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	20.2°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

[redacted]

SAMPLE RECEIPT ADVICE

SE258401

CLIENT DETAILS

Client JM ENVIRONMENTS

Project JME21073

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	MW2	1	22	7	9	11	7
002	MW3	1	22	7	9	11	7
003	MW4	1	22	7	9	11	7
004	QC1	1	22	7	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

[redacted]

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

VPH - Detection limit(s) raised due to the presence of interferences in the sample.

[redacted]

[redacted]

VOCs in Water [AN433] Tested: 21/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
Benzene	µg/L	0.5	**13**	**0.5**	<0.5	<0.5
Toluene	µg/L	0.5	<5.0↑	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<5.0↑	<0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<10↑	<1	<1	<1
o-xylene	µg/L	0.5	<5.0↑	**5.8**	<0.5	<0.5
Total Xylenes	µg/L	1.5	**2.7**	**5.8**	<1.5	<1.5
Total BTEX	µg/L	3	**17**	**6**	<3	<3
Naphthalene (VOC)*	µg/L	0.5	**300**	**1.0**	<0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 21/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
TRH C6-C9	µg/L	40	**3600**	**77**	<40	<40
Benzene (F0)	µg/L	0.5	**13**	**0.5**	<0.5	<0.5
TRH C6-C10	µg/L	50	**4200**	**90**	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	**4200**	**83**	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 21/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
TRH C10-C14	µg/L	50	**11000**	**1100**	<50	<50
TRH C15-C28	µg/L	200	**12000**	**1700**	<200	<200
TRH C29-C36	µg/L	200	<200	<200	<200	<200
TRH C37-C40	µg/L	200	<200	<200	<200	<200
TRH >C10-C16	µg/L	60	**14000**	**1400**	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	**14000**	**1400**	<60	<60
TRH >C16-C34 (F3)	µg/L	500	**8500**	**1400**	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500	<500	<500
TRH C10-C40	µg/L	320	**23000**	**2900**	<320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 21/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
Naphthalene	µg/L	0.1	**250**	**28**	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	**340**	**49**	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	**250**	**41**	<0.1	<0.1
Acenaphthylene	µg/L	0.1	**2.6**	**0.4**	<0.1	<0.1
Acenaphthene	µg/L	0.1	**11**	**2.1**	<0.1	<0.1
Fluorene	µg/L	0.1	**35**	**3.3**	<0.1	<0.1
Phenanthrene	µg/L	0.1	**45**	**1.9**	<0.1	<0.1
Anthracene	µg/L	0.1	**2.1**	<0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	**1.7**	**0.1**	<0.1	<0.1
Pyrene	µg/L	0.1	**2.6**	**0.1**	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	**0.1**	<0.1	<0.1	<0.1
Chrysene	µg/L	0.1	**0.3**	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	**940**	**130**	<1	<1

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 20/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
Arsenic	µg/L	1	**6**	**15**	**24**	**24**
Cadmium	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	1	<1	<1	<1	<1
Copper	µg/L	1	**1**	**3**	**1**	**1**
Lead	µg/L	1	<1	<1	<1	<1
Nickel	µg/L	1	**3**	**6**	**1**	**1**
Zinc	µg/L	5	**27**	<5	<5	**17**

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 20/12/2023

PARAMETER	UOM	LOR	MW2 WATER - 15/12/2023 SE258401.001	MW3 WATER - 15/12/2023 SE258401.002	MW4 WATER - 15/12/2023 SE258401.003	QC1 WATER - 15/12/2023 SE258401.004
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR			
***	Indicates that both * and ** apply.		Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE258401 R0

[redacted]

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	4 Water	Type of documentation received	COC
Date documentation received	19/12/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	20.2°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

[redacted]

HOLDING TIME SUMMARY

SE258401 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300046	15 Dec 2023	19 Dec 2023	12 Jan 2024	20 Dec 2023	12 Jan 2024	20 Dec 2023
MW3	SE258401.002	LB300046	15 Dec 2023	19 Dec 2023	12 Jan 2024	20 Dec 2023	12 Jan 2024	20 Dec 2023
MW4	SE258401.003	LB300046	15 Dec 2023	19 Dec 2023	12 Jan 2024	20 Dec 2023	12 Jan 2024	20 Dec 2023
QC1	SE258401.004	LB300046	15 Dec 2023	19 Dec 2023	12 Jan 2024	20 Dec 2023	12 Jan 2024	20 Dec 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023
MW3	SE258401.002	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023
MW4	SE258401.003	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023
QC1	SE258401.004	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300039	15 Dec 2023	19 Dec 2023	12 Jun 2024	20 Dec 2023	12 Jun 2024	20 Dec 2023
MW3	SE258401.002	LB300039	15 Dec 2023	19 Dec 2023	12 Jun 2024	20 Dec 2023	12 Jun 2024	20 Dec 2023
MW4	SE258401.003	LB300039	15 Dec 2023	19 Dec 2023	12 Jun 2024	20 Dec 2023	12 Jun 2024	20 Dec 2023
QC1	SE258401.004	LB300039	15 Dec 2023	19 Dec 2023	12 Jun 2024	20 Dec 2023	12 Jun 2024	20 Dec 2023

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	12 Jan 2024
MW3	SE258401.002	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023
MW4	SE258401.003	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023
QC1	SE258401.004	LB300191	15 Dec 2023	19 Dec 2023	22 Dec 2023	21 Dec 2023	30 Jan 2024	28 Dec 2023

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
MW3	SE258401.002	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
MW4	SE258401.003	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
QC1	SE258401.004	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
MW2	SE258401.001	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
MW3	SE258401.002	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
MW4	SE258401.003	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023
QC1	SE258401.004	LB300337	15 Dec 2023	19 Dec 2023	29 Dec 2023	21 Dec 2023	29 Dec 2023	27 Dec 2023

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	MW2	SE258401.001	%	40 - 130%	66
	MW3	SE258401.002	%	40 - 130%	78
	MW4	SE258401.003	%	40 - 130%	78
	QC1	SE258401.004	%	40 - 130%	78
d14-p-terphenyl (Surrogate)	MW2	SE258401.001	%	40 - 130%	70
	MW3	SE258401.002	%	40 - 130%	80
	MW4	SE258401.003	%	40 - 130%	82
	QC1	SE258401.004	%	40 - 130%	88
d5-nitrobenzene (Surrogate)	MW2	SE258401.001	%	40 - 130%	90
	MW3	SE258401.002	%	40 - 130%	82
	MW4	SE258401.003	%	40 - 130%	76
	QC1	SE258401.004	%	40 - 130%	74

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	MW2	SE258401.001	%	40 - 130%	127
	MW3	SE258401.002	%	40 - 130%	119
	MW4	SE258401.003	%	40 - 130%	116
	QC1	SE258401.004	%	40 - 130%	119
d4-1,2-dichloroethane (Surrogate)	MW2	SE258401.001	%	40 - 130%	85
	MW3	SE258401.002	%	40 - 130%	104
	MW4	SE258401.003	%	40 - 130%	107
	QC1	SE258401.004	%	40 - 130%	107
d8-toluene (Surrogate)	MW2	SE258401.001	%	40 - 130%	129
	MW3	SE258401.002	%	40 - 130%	126
	MW4	SE258401.003	%	40 - 130%	112
	QC1	SE258401.004	%	40 - 130%	113

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	MW2	SE258401.001	%	40 - 130%	127
	MW3	SE258401.002	%	40 - 130%	119
	MW4	SE258401.003	%	40 - 130%	116
	QC1	SE258401.004	%	40 - 130%	119
d4-1,2-dichloroethane (Surrogate)	MW2	SE258401.001	%	60 - 130%	85
	MW3	SE258401.002	%	60 - 130%	104
	MW4	SE258401.003	%	60 - 130%	107
	QC1	SE258401.004	%	60 - 130%	107
d8-toluene (Surrogate)	MW2	SE258401.001	%	40 - 130%	129
	MW3	SE258401.002	%	40 - 130%	126
	MW4	SE258401.003	%	40 - 130%	112
	QC1	SE258401.004	%	40 - 130%	113

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB300046.001	Mercury	mg/L	0.0001	<0.0001

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB300191.001		Naphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Acenaphthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1
		Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	66
		2-fluorobiphenyl (Surrogate)	%	-	68
		d14-p-terphenyl (Surrogate)	%	-	74

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB300039.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5
LB300039.025	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB300191.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB300337.001	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)*	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88
		d8-toluene (Surrogate)	%	-	94
		Bromofluorobenzene (Surrogate)	%	-	84

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Water — **Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result
LB300337.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88
		d8-toluene (Surrogate)	%	-	94
		Bromofluorobenzene (Surrogate)	%	-	84

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258402.005	LB300046.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258401.003	LB300191.029		Naphthalene	µg/L	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
			Fluorene	µg/L	0.1	<0.1	<0.1	200	0
			Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
			Anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Chrysene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.4	0.4	30	0
			2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.4	30	5
			d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.4	30	2
SE258463.004	LB300191.028		Naphthalene	µg/L	0.1	<0.1	<0.1	190	0
			2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
			Fluorene	µg/L	0.1	<0.1	<0.1	200	0
			Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
			Anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Chrysene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.4	0.4	30	8
			2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.4	30	10
			d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.4	30	5

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258402.003	LB300039.014	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	3	3	48	8
		Copper	µg/L	1	<1	1	114	5
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	166	0
SE258437.003	LB300039.028	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	171	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Trace Metals (Dissolved) in Water by ICPMS (continued)

Method: ME-(AU)-[ENV]AN318

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258437.003	LB300039.028		Lead	µg/L	1	<1	<1	200	0
			Nickel	µg/L	1	5	5	34	0
SE258442.001	LB300039.031		Arsenic	µg/L	1	1	1	109	9
			Cadmium	µg/L	0.1	0.1	0.1	87	11
			Chromium	µg/L	1	<1	<1	129	0
			Copper	µg/L	1	3	3	50	6
			Lead	µg/L	1	<1	<1	200	0
			Nickel	µg/L	1	3	3	51	1
			Zinc	µg/L	5	110	110	20	2

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258401.003	LB300191.028		TRH C10-C14	µg/L	50	<50	<50	200	0
			TRH C15-C28	µg/L	200	<200	<200	200	0
			TRH C29-C36	µg/L	200	<200	<200	200	0
			TRH C37-C40	µg/L	200	<200	<200	200	0
			TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0
SE258463.004	LB300191.029		TRH C10-C14	µg/L	50	<50	<50	200	0
			TRH C15-C28	µg/L	200	<200	<200	200	0
			TRH C29-C36	µg/L	200	<200	<200	200	0
			TRH C37-C40	µg/L	200	<200	<200	200	0
			TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258403.001	LB300337.023	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.2	8.9	30	22
			d8-toluene (Surrogate)	µg/L	-	10.6	11.7	30	10
			Bromofluorobenzene (Surrogate)	µg/L	-	11.4	11.5	30	1
		Totals	Total BTEX	µg/L	3	<3	<3	200	0
SE258463.004	LB300337.024	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.2	9.4	30	17
			d8-toluene (Surrogate)	µg/L	-	11.1	12.0	30	8
			Bromofluorobenzene (Surrogate)	µg/L	-	11.8	11.6	30	2
		Totals	Total BTEX	µg/L	3	<3	<3	200	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258403.001	LB300337.023		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.2	8.9	30	22
			d8-toluene (Surrogate)	µg/L	-	10.6	11.7	30	10
			Bromofluorobenzene (Surrogate)	µg/L	-	11.4	11.5	30	1
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Water (continued) — **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE258403.001	LB300337.023	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0
SE258463.004	LB300337.024		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.2	9.4	30	17
			d8-toluene (Surrogate)	µg/L	-	11.1	12.0	30	8
			Bromofluorobenzene (Surrogate)	µg/L	-	11.8	11.6	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB300191.002		Naphthalene	µg/L	0.1	34	40	60 - 140	84
		Acenaphthylene	µg/L	0.1	39	40	60 - 140	97
		Acenaphthene	µg/L	0.1	38	40	60 - 140	94
		Phenanthrene	µg/L	0.1	40	40	60 - 140	99
		Anthracene	µg/L	0.1	34	40	60 - 140	86
		Fluoranthene	µg/L	0.1	37	40	60 - 140	92
		Pyrene	µg/L	0.1	37	40	60 - 140	93
		Benzo(a)pyrene	µg/L	0.1	38	40	60 - 140	94
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	68
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	78
		d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	76

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB300039.002		Arsenic	µg/L	1	21	20	80 - 120	103
		Cadmium	µg/L	0.1	21	20	80 - 120	103
		Chromium	µg/L	1	20	20	80 - 120	99
		Copper	µg/L	1	20	20	80 - 120	98
		Lead	µg/L	1	21	20	80 - 120	107
		Nickel	µg/L	1	21	20	80 - 120	107
		Zinc	µg/L	5	21	20	80 - 120	104
LB300039.026		Arsenic	µg/L	1	21	20	80 - 120	105
		Cadmium	µg/L	0.1	21	20	80 - 120	105
		Chromium	µg/L	1	19	20	80 - 120	96
		Copper	µg/L	1	19	20	80 - 120	95
		Lead	µg/L	1	21	20	80 - 120	103
		Nickel	µg/L	1	21	20	80 - 120	104
		Zinc	µg/L	5	22	20	80 - 120	111

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB300191.002		TRH C10-C14	µg/L	50	1200	1200	60 - 140	96
		TRH C15-C28	µg/L	200	1300	1200	60 - 140	110
		TRH C29-C36	µg/L	200	1200	1200	60 - 140	98
	TRH F Bands	TRH >C10-C16	µg/L	60	1300	1200	60 - 140	107
		TRH >C16-C34 (F3)	µg/L	500	1300	1200	60 - 140	106
		TRH >C34-C40 (F4)	µg/L	500	550	600	60 - 140	91

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB300337.002	Monocyclic Aromatic	Benzene	µg/L	0.5	56	45.45	60 - 140	123
		Toluene	µg/L	0.5	56	45.45	60 - 140	124
		Ethylbenzene	µg/L	0.5	49	45.45	60 - 140	108
		m/p-xylene	µg/L	1	98	90.9	60 - 140	108
		o-xylene	µg/L	0.5	49	45.45	60 - 140	108
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.0	10	60 - 140	90
		d8-toluene (Surrogate)	µg/L	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10	70 - 130	101

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB300337.002		TRH C6-C10	µg/L	50	1000	946.63	60 - 140	107
		TRH C6-C9	µg/L	40	880	818.71	60 - 140	107
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.0	10	60 - 140	90
		d8-toluene (Surrogate)	µg/L	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10	70 - 130	101
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	700	639.67	60 - 140	110

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE258353.042	LB300046.004	Mercury	mg/L	0.0001	0.0024	<0.0001	0.008	118

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE257828A.011	LB300039.004	Zinc	µg/L	5	23	<5	20	98

VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE258463.001	LB300337.025	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5	45.45	118
			Toluene	µg/L	0.5	<0.5	45.45	120
			Ethylbenzene	µg/L	0.5	<0.5	45.45	109
			m/p-xylene	µg/L	1	<1	90.9	106
			o-xylene	µg/L	0.5	<0.5	45.45	106
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.0	-	102
			d8-toluene (Surrogate)	µg/L	-	10.9	-	126
			Bromofluorobenzene (Surrogate)	µg/L	-	11.9	-	124
		Totals	Total BTEX	µg/L	3	<3	-	-

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE258463.001	LB300337.025		TRH C6-C10	µg/L	50	<50	946.63	107
			TRH C6-C9	µg/L	40	<40	818.71	106
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.0	-	102
			d8-toluene (Surrogate)	µg/L	-	10.9	-	126
			Bromofluorobenzene (Surrogate)	µg/L	-	11.9	-	124
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	-	-
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	639.67	111

MATRIX SPIKE DUPLICATES

SE258401 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

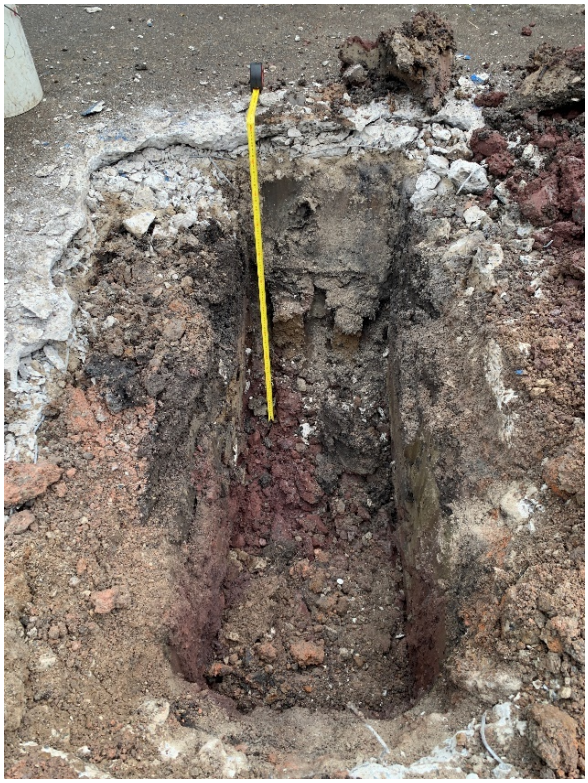
Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

Appendix C

Test Pit Photographs



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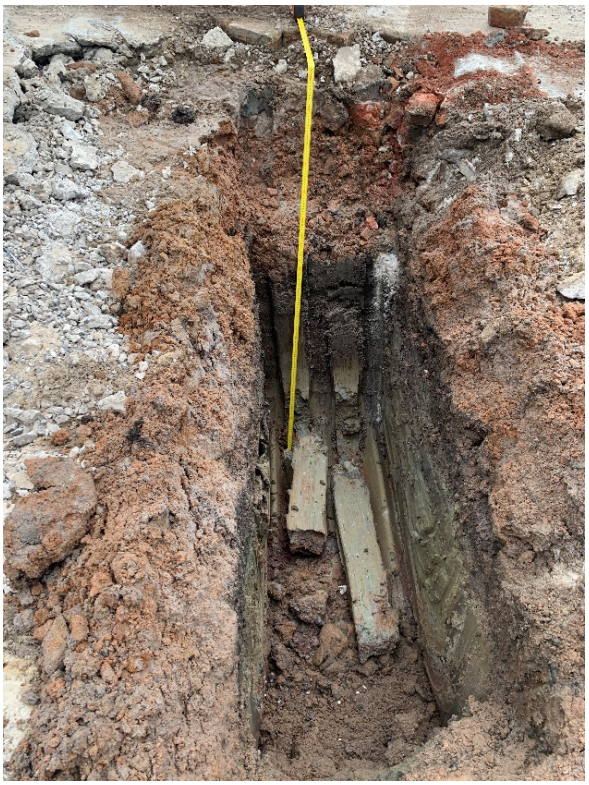

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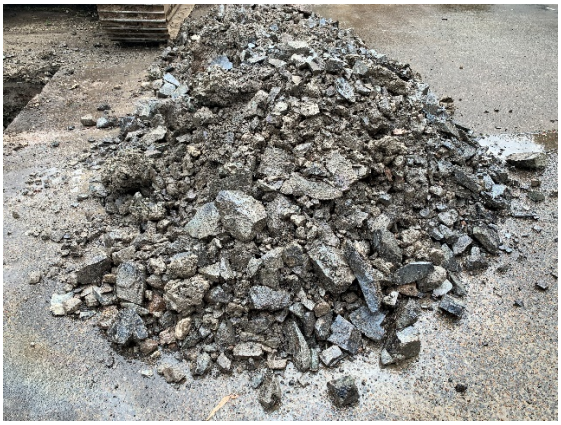

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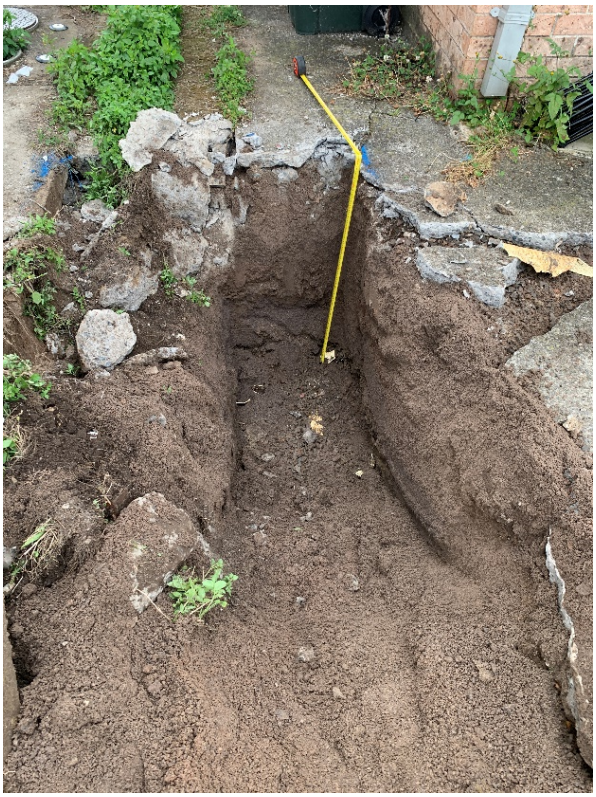

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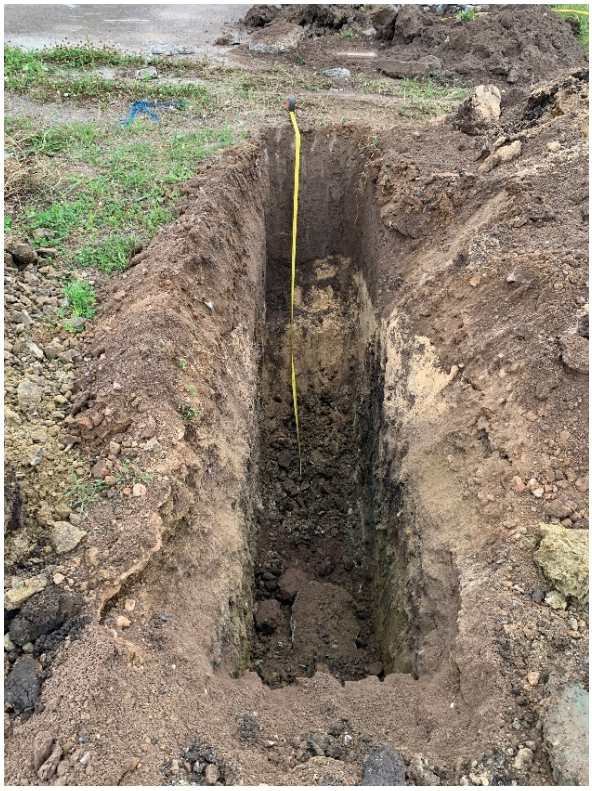

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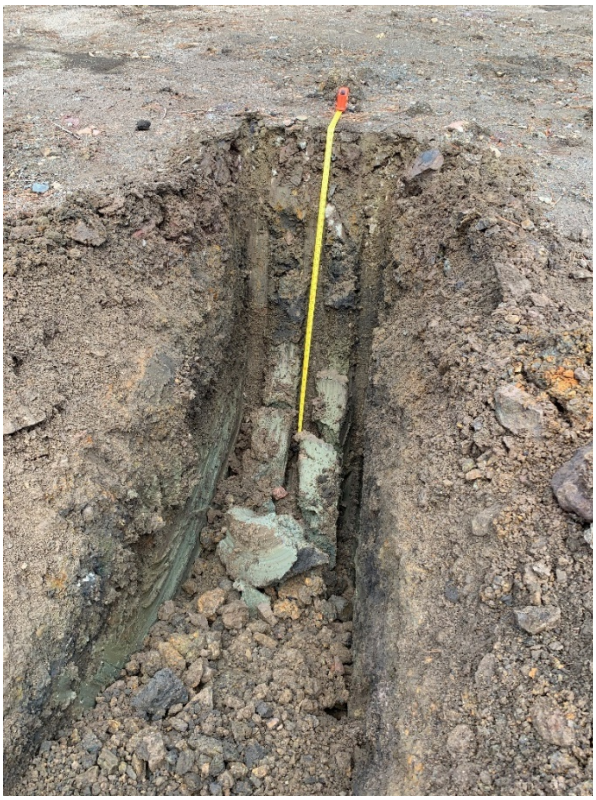

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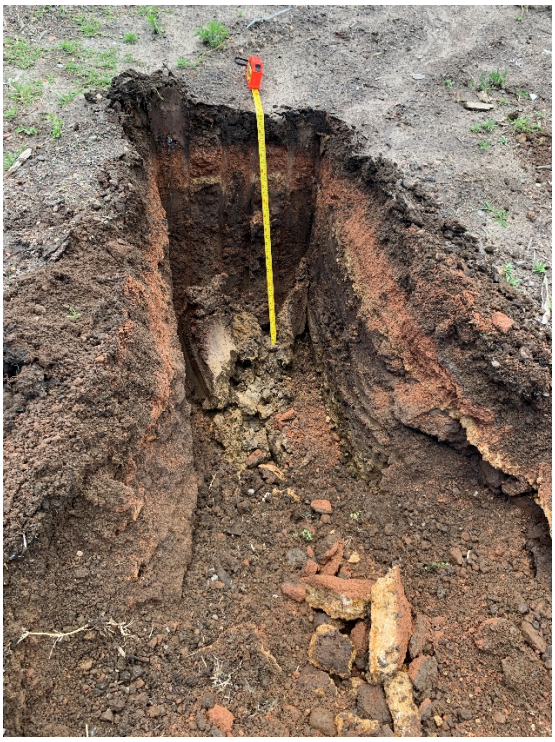

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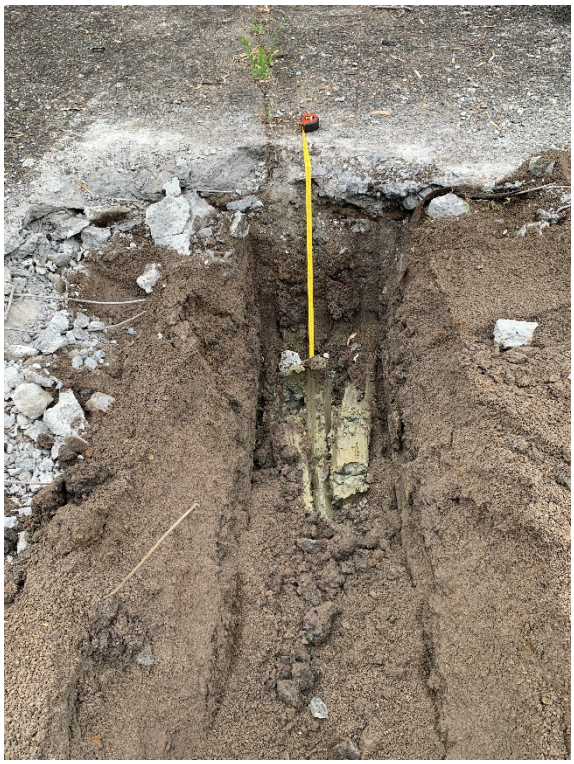

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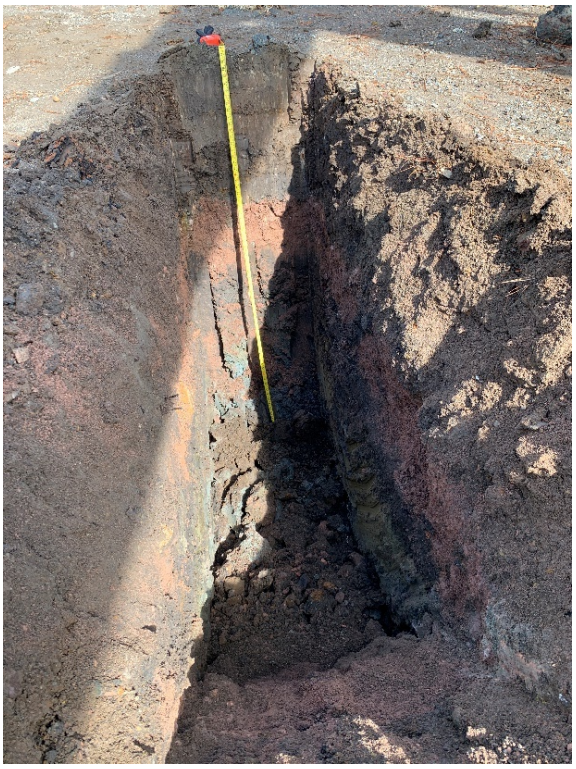

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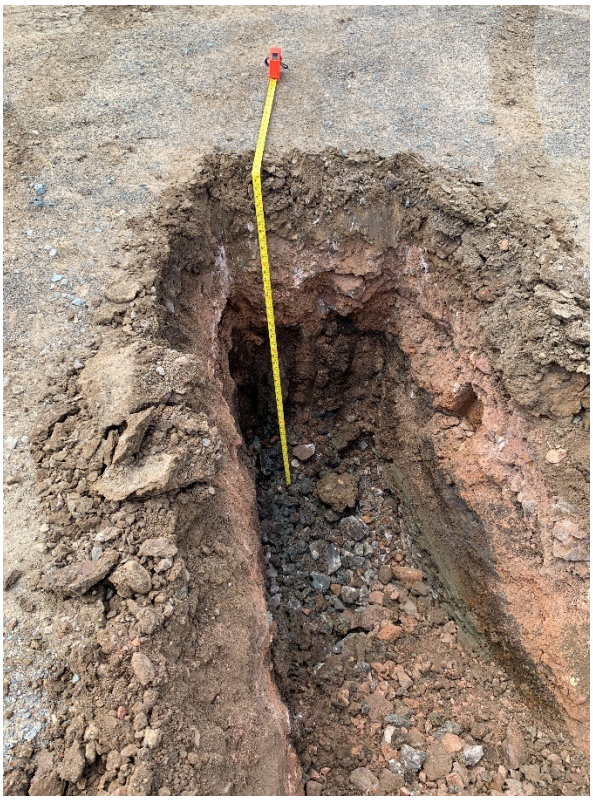

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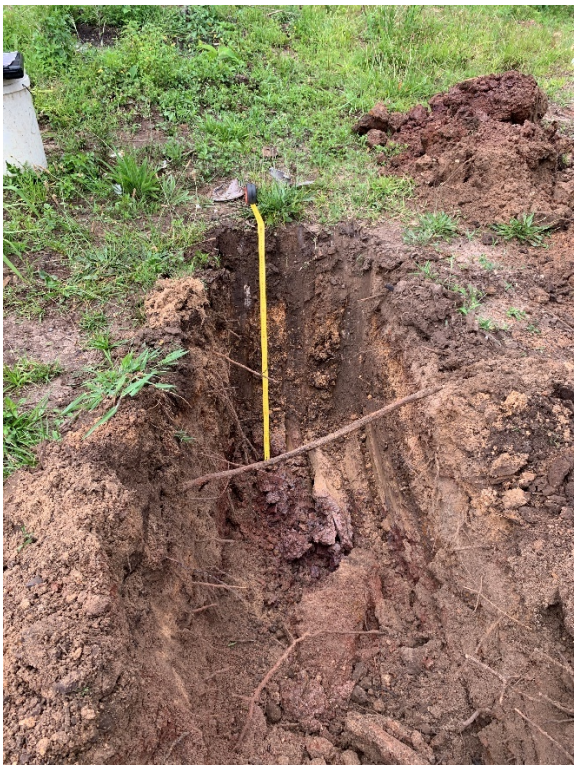

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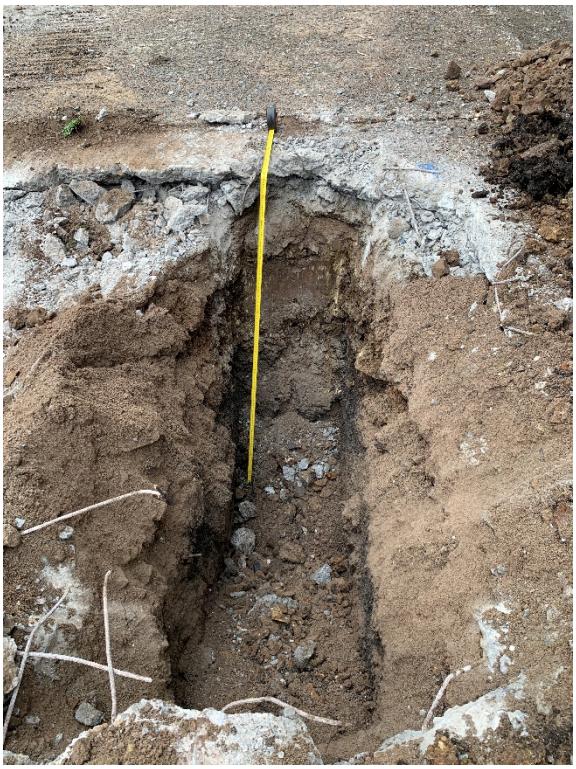

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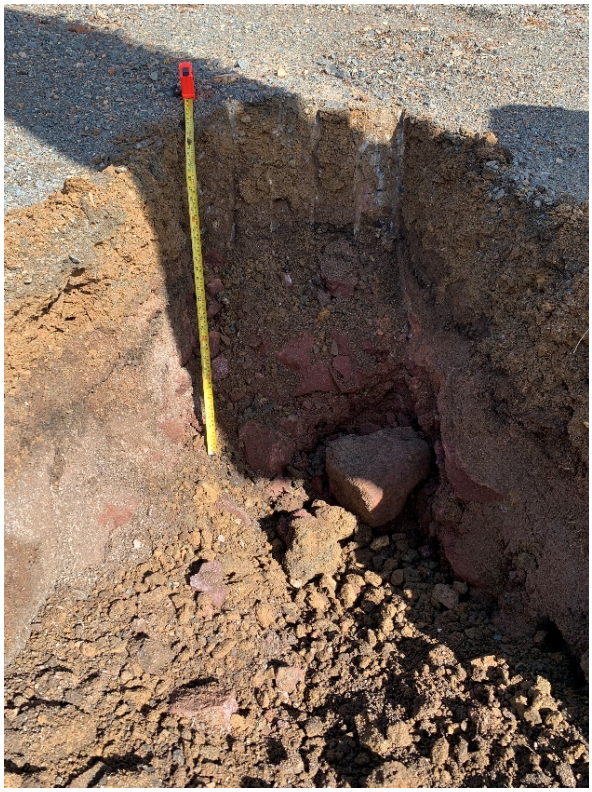

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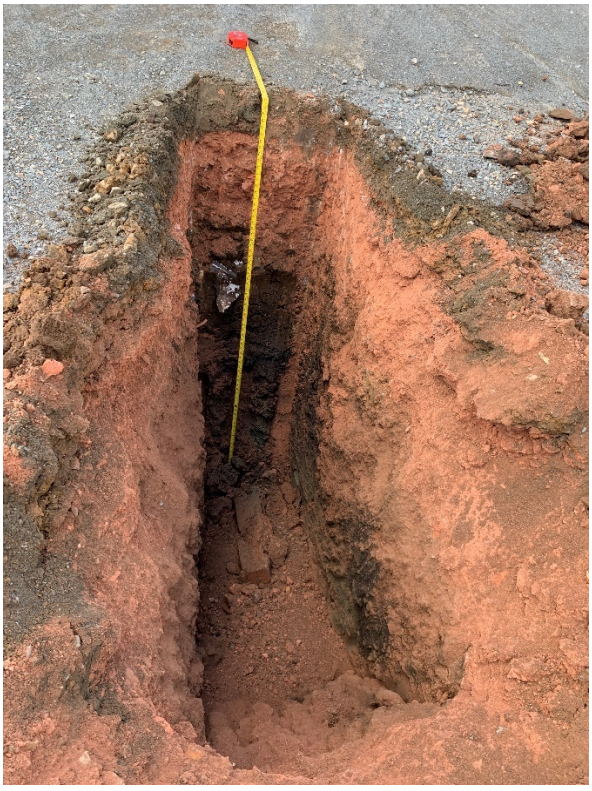

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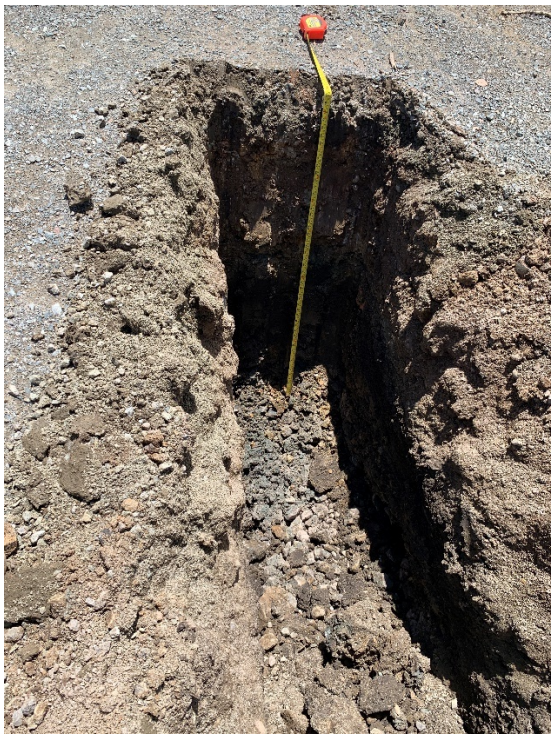

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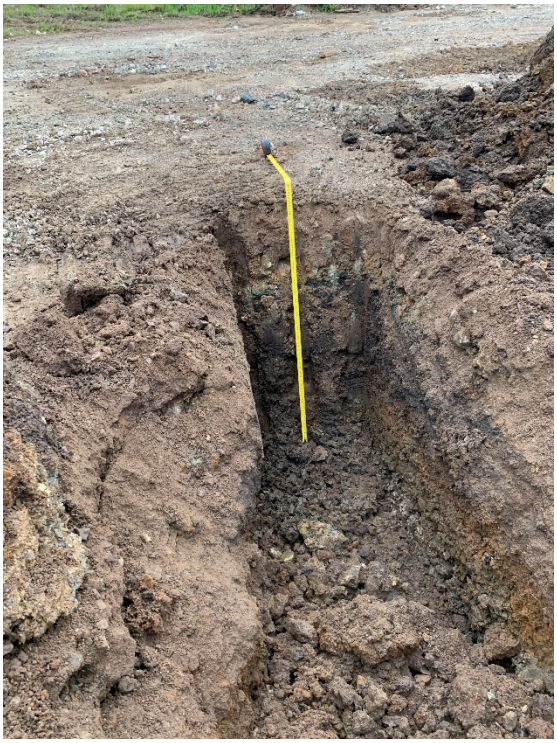

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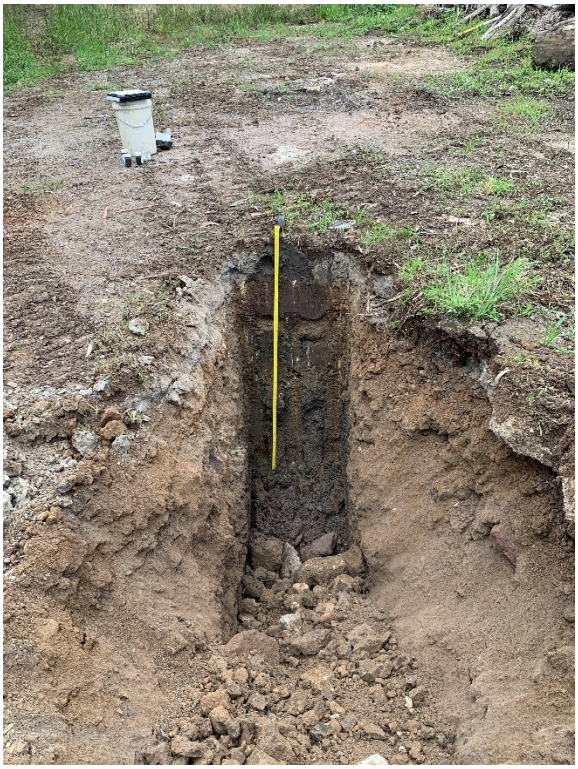

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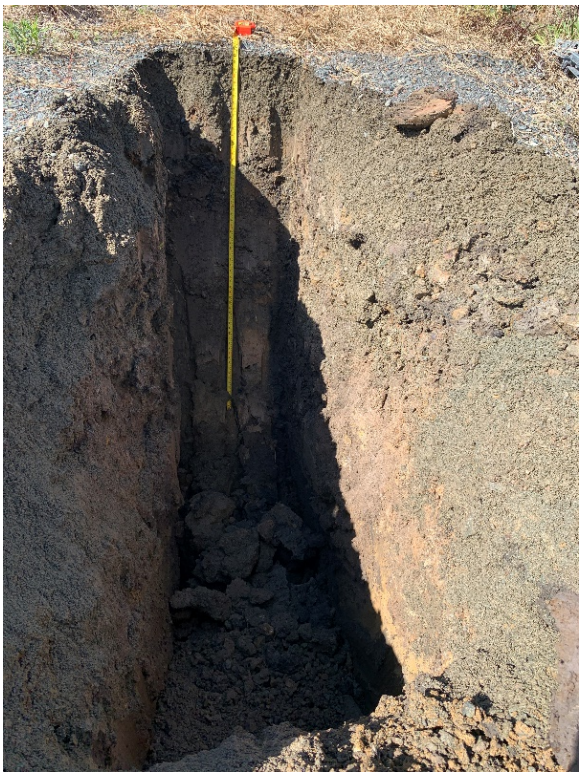

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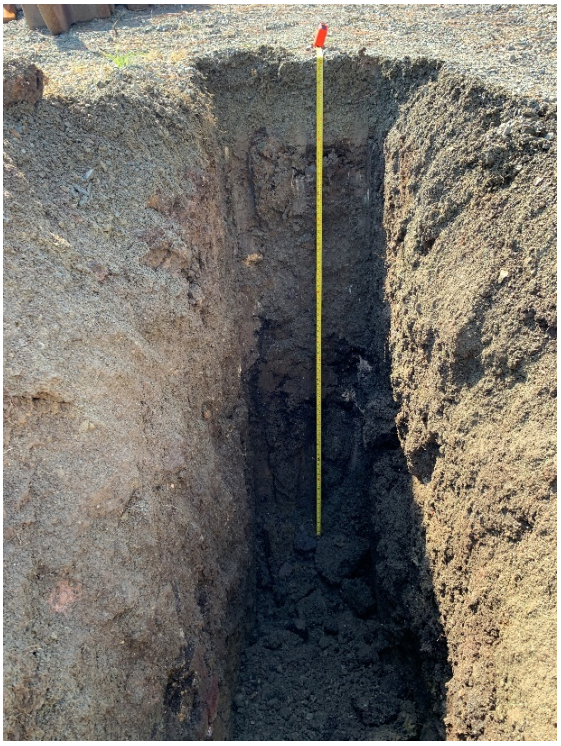

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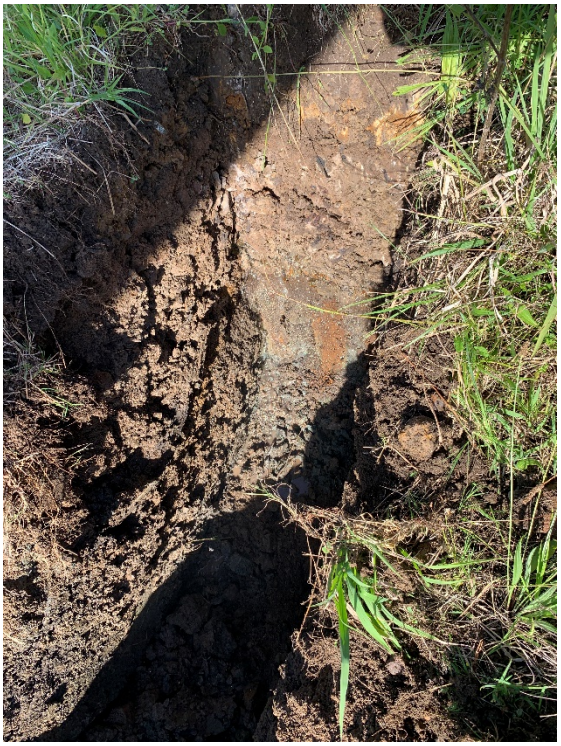

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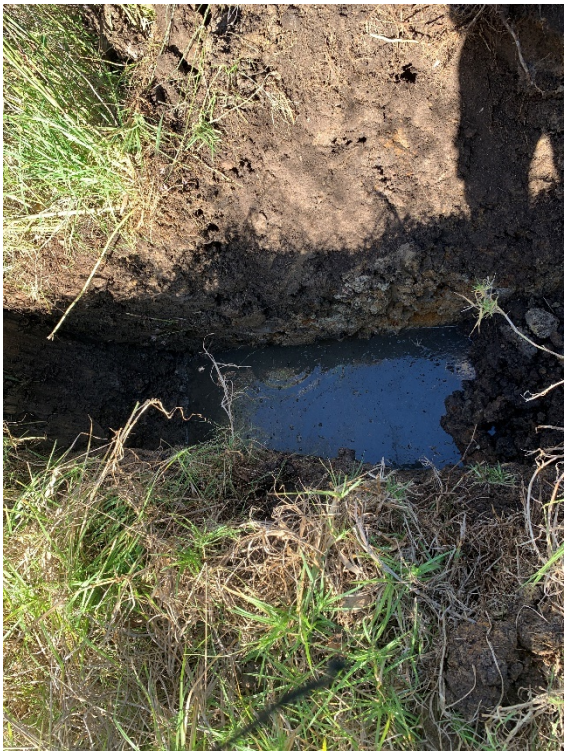

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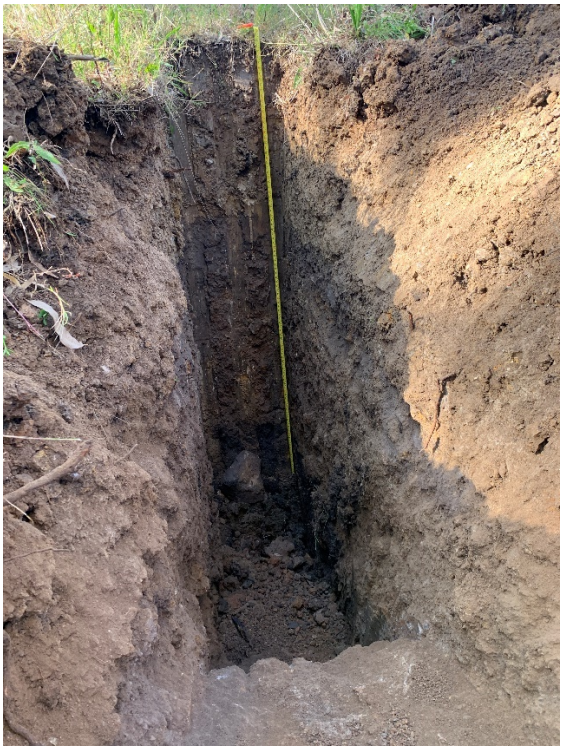

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