Catholic Education Diocese of Bathurst
C/- TSA Management P/L

Detailed Site Investigation:

48 Broadhead Road, Mudgee, NSW

martens consulting engineers

ENVIRONMENTAL

WATER

WASTEWATER

GEOTECHNICAL

CIVIL

PROJECT MANAGEMENT

P1907109JR01V01
March 2020

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Document and Distribution Status

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Revision No.	Description	Status	Release Date	Document Location			
				File Copy	TSA Management P/L		
1	Initial release	Draft	05.07.2019	1E 1P	1P		
1	Final release	Final	18.03.2020	1E 1P	1P		

Distribution Types: F = fax, H = hard copy, P = PDF document, E = other electronic format. Digits indicate number of document copies.

All enquiries regarding this project are to be directed to the Project Manager.

Contents

General Abbreviations

ACM	Asbestos-containing material
AEC	Areas of environmental concern
ASC NEPM	National Environmental Protection (Assessment of Site Contamination) Measure (2013)
BGL	Below ground level
BH	Borehole
BTEXN	Benzene, toluene, ethylbenzene, xylene, naphthalene
COPC	Contaminants of potential concern
DA	Development application
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change
DP	Deposited Plan
DS	Dam sediment
DSI	Detailed Site Investigation
EPA	Environmental Protection Authority
HM	Heavy metals
LEP	Local Environmental Plan
MA	Martens & Associates
mAHD	Metres, Australian Height Datum
mbgl	Metres below ground level
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochloride pesticides
OEH	Office of Environment and Heritage
OPP	Organophosphorus pesticides
PACM	Potential asbestos containing material
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyl
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
SS	Surface soil
TRH	Total recoverable hydrocarbons
UCL	Upper confidence limit
VHC	Volatile halogenated compounds
VOC	Volatile organic compounds

1 Overview

1.1 Introduction

This report, prepared by Martens and Associates (MA), documents the findings of a Detailed Site Investigation (DSI) to support a development application (DA) to Mid-Western Regional Council for a proposed high school at 48 Broadhead Road, Mudgee, NSW ('the site'), as shown in Figure 1, Attachment A.

A Preliminary Site Investigation (PSI) was previously completed by Envirowest Consulting Pty Ltd (2019) for the site and should be read in conjunction with this report.

1.2 Objectives

DSI objectives include:

- Review of PSI (Envirowest, 2019).
- Intrusive soil investigation and soil sampling program where access is available, targeting areas of environmental concern outlined in the PSI (Envirowest, 2019).
- Laboratory analysis of selected soil samples for identified COPC and assessment against site acceptance criteria (SAC).
- Findings of the investigation to be documented in this DSI report in general accordance with relevant sections of NSW OEH (2011), ASC NEPM (2013) and NSW EPA (2017).

1.3 Reference Guidelines

This assessment is prepared in general accordance with the following guidelines:

- NSW EPA (1995) Sampling Design Guidelines.
- NSW OEH (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites.
- NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure. Referred to as ASC NEPM (2013).
- NSW EPA (2017) 3rd Ed. Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme.

2 Site Background Information

2.1 Site Details

Site information is summarised in Table 1, with site location and general surrounds shown in Figure 1, Attachment A.

Table 1: Site background information.

Item	Description / Detail
Site address	48 Broadhead Road, Mudgee, NSW
Legal Identifier	Lot 40 in DP 756894
Surveyed area	12.14 ha (Barnson, 2018)
Local Government Area	Mid-Western Regional Council.
Current zoning and land use	Both lots are zoned RU4 – Primary Production Small Lots, and R1 – General Residential, under the Mid-Western Regional LEP, 2012.
Proposed land use	The proposal plans (Alleanza Architecture, 2018) indicate that the development will include the construction of a new catholic school comprising a professional hub, a chapel, a community / performance / food Hub, a research / technical / creative Hub, three secondary 2 storey buildings, and a parking lot.
Site description	The site was a vacant grassland with a dam located the north west portion of site.
Surrounding land uses	Broadhead Road bounded the site to the west, Bruce Road to the south with rural residential properties in all directions and residential sub-division in the north-western direction of the site.
Topography	Site slopes are generally flat (<5%). Site elevation ranges from approximately 483 mAHD at the northeast corner to 491 mAHD near the southwest boundary of the site (Barnson, 2018).
Expected geology and soils	The *Mudgee 1:100 000 Geological Sheet 8832,*.describes site geology as Quaternary at the eastern portion of site, consisting of alluvial silt, clay and sand, variable humic content, sporadic pebble to cobble-sized unconsolidated conglomeratic lenses and Gunnedah Basin at the western portion of site, consisting of carbonaceous siltstone quartz-lithic sandstone, conglomerate and coal lenses, rare varves. The NSW Environment and Heritage eSPADE website identifies the site as having soils of the Craigmore soil landscapes consisting of alluvial terraces at the Cudgegong River, and Eurundury and Wialdra Creeks. 20 m above the modern floodplain. Relief to 40 m; slopes <2 %. Noncalcic Brown Soils and Red Earths on very old Quaternary alluvium. Yellow Podzolic-Solodic Soils intergrades on lower lying areas. Some Alluvial Soils and leached loams on lower terraces adjacent to major streams.
Surface hydrology	Site drainage is via overland flow to the north towards Sawpit Gully which intersects the site in the northwest portion.

2.2 Previous Site Investigations

A PSI (Envirowest, 2019) was completed for the site, which provided potential sources of contamination. A summary of key findings is provided in Table 2.

Table 2: Summary of Phase 1 Contamination Assessment (Envirowest, 2019).

Investigation Details	Investigation Task and Finding
Scope of works	o Desktop review of previous reports, aerial photographs, online databases and land title information. o Review of local geology, hydrogeology and topography maps. o Site walkover and visual inspection to review existing site conditions on 6 February 2019. o Soil sampling for analysis of metals and organochlorine pesticides (OCP).
Key findings of historic site review and walkover	The site appeared to have been used for grazing since 1965, with Sawpit Gully visible from the southwest corner to northeast corner of the site. A dam was constructed within Sawpit Gully between 1965 and 1980. Soil disturbance, associated with trench adjacent the drainage line between 2002 and 2015. Otherwise, little to no changes occurred from 1965 to present. 48 Broadhead Road, Mudgee, NSW: o No buildings on site. o An electrical switchboard was identified in the north western portion of the site. o A stormwater pipe runs through the site. o Stockpiles containing gravelly sandy clay identified at northeast corner of the site.
Areas of environmental concern	Areas of environmental concern identified as: o Stockpiles o Dam
Recommendations	o Envirowest reported results below the adopted threshold and suggested the site was suitable to the proposed land-use, subject to the removal of the identified stockpile.

3 Conceptual Site Model

3.1 Areas of Environmental Concern (AEC) and Contaminants of Potential Concern (COPC)

Table 3 summarises the site AEC and COPC identified from review of previous site documentation. A map showing locations of identified AEC is provided in Attachment A.

Table 3: Summary of AEC and COPC.

AEC	Potential for Contamination	COPC
AEC A – Stockpiles	Contaminants from unknown contents of stockpiles, drums and containers may have spilled or leaked onto underlying soil.	HM, TRH, BTEXN, PAH, OCP/OPP and asbestos
AEC B – Dam	Contaminants from onsite and surrounding rural and commercial land use may have washed into and accumulated in the dam.	HM and OCP/OPP
AEC C – Agricultural Use	Contaminants from agricultural use may contaminate underlying soil.	OCP/OPP

Whilst preliminary sampling was undertaken by Envirowest (2019) to assess AEC C, the sampling regime did not meet EPA (1995) Sampling Design Guidelines. Even though the contamination risk for this AEC is considered low, a supplementary program of testing was requested by the client to ensure guideline sampling compliance for the AEC.

3.2 Pathways and Sensitive Receptors

A conceptual site model based on the COPC identified and the associated exposure pathways to potential receptors is shown in Table 4.

Table 4: Preliminary Conceptual Site Model.

COPC	Pathway	Receptor
HM PAH / Phenols OCP / OPP	Leaching of contaminants through the soil profile. Transport of contaminants via air. Transport of contaminants by mechanical disturbance (e.g. earthworks). Biomagnification and / or bioaccumulation along food chains. Dermal contact with contaminants Digestion of contaminants	<u>Possible Human Receptors</u> Current or future site users. On- and off-site construction or maintenance workers. Current or future users of surrounding residences, reserves, and commercial or industrial premises. <u>Possible Environmental Receptors</u> Flora and fauna that may inhabit or migrate through the site and receptor areas.
TRH / BTEXN	As above plus: Volatilisation to air	

COPC	Pathway	Receptor
Asbestos	Transport of contaminants via air and inhalation of particles Transport of contaminants by mechanical disturbance (e.g. earthworks). Transport of particles on clothing	<u>Possible Human Receptors</u> Current or future site users. On- and off-site construction or maintenance workers. Current or future users of surrounding residences, reserves, and commercial or industrial premises.

4 Sampling, Analytical and Quality Plan

A Sampling Analytical and Quality Plan (SAQP) was developed to ensure that data collected for the DSI is representative and provides a robust basis for site assessment decisions. Preparation of the SAQP has been completed in general accordance with ASC NEPM (2013) methodology and includes:

- Data quality objectives (DQO).
- Data quality indicators (DQI).
- Sampling methodologies and procedures.

Field screening methods:

- Sample handling, preservation and storage procedures.
- Analytical QA/QC.

The following sections summarise the DQO, DQI and QA/QC.

4.1 Data Quality Objectives

DQO were prepared as statements specifying qualitative and quantitative data required to support project decisions. DQO have been prepared in general accordance with NSW EPA (2017) and ASC NEPM (2013) guidelines, and are presented in Table 5.

Table 5: DQO for the investigation.

Step 1 **Stating the Problem**	Review of previous site documentation identified potential contaminants that might be accessible to the staff and students of the school, and people during construction. This DSI is required to assess risk posed by AEC and COPC to likely receptors.
Step 2 **Identifying the Decision(s)**	To assess the suitability of the site for future land use, decisions are to be made based on the following questions: o What is the contaminant exposure pathway? o Has previous or current site use impacted the site that may pose a risk to humans or the environment for future land use? o Does the site require remediation or management prior to construction?
Step 3 **Identification of Inputs to the Decision**	The inputs to the assessment include: o Soil sampling at nominated locations across the site. o Laboratory analytical results for relevant COPC. o Assessment of analytical results against site suitable guidelines.

Step 4 **Study Boundary Definitions**	Study boundaries are as follows: o Lateral – Lateral boundary of the assessment is defined by the site boundary. o Vertical – Vertical boundary is governed by the maximum depth reached during subsurface investigations. o Temporal – Two rounds of soil sampling has been undertaken at this stage.
Step 5 **Development of Decision Rules**	The decision rule for this investigation area is as follows: If the concentration of contaminants in the soil data exceeds the adopted assessment criteria a risk assessment is required. Should the risk be unacceptable further investigations to remediate and or manage the onsite impacts in relation to the proposed development will be undertaken.
Step 6 **Specification of Limits on Decision Errors**	Guidance found in ASC NEPM (2013) Schedule B2 regarding 95% upper confidence limit (UCL) states that the 95% UCL of the arithmetic mean provides a 95% confidence level that the true population mean will be less than or equal to this value. Therefore a decision can be made based on a probability that 95% of the data collected will satisfy the site acceptance criteria. A limit on decision error will be 5% that a conclusive statement may be incorrect.
Step 7 **Optimisation of Sampling Design**	Proposed sampling locations shall provide even coverage across the site and identified AEC. Sampling shall attempt to ensure that critical locations are assessed, sampled, and analysed for appropriate contaminants of concern. Soil sampling locations were set subject to access and using a combined judgemental and grid pattern across the investigation area.

4.2 Data Quality Indicators

In accordance with NSW EPA (2017), the investigation data set has been compared with DQI outlined in Table 6 to ensure that collected data meets the project needs and that DQO have been met.

Table 6: Data Quality Indicators.

Assessment Measure (DQI)	Comment
Precision – A measure of the variability (or reproducibility) of data.	Precision is assessed by reviewing blind field duplicated sample set through the calculation of relative percent difference (RPD). Data precision is deemed acceptable where results are 0-10 x EQL or where RPDs are < 50% (10-30 x EQL) or < 30% (>30 x EQL). Exceedance of this range may still be considered acceptable where heterogeneous materials are sampled.
Accuracy – A measure of the closeness of reported data to the "true value".	Data accuracy is assessed by: o Field spikes and blanks. o Laboratory control samples.

Assessment Measure (DQI)	Comment
Representativeness – The confidence that data are representative of each media present on the site.	To ensure data representativeness the following field and laboratory procedures are followed: o Ensure that the design and implementation of the sampling program has been completed in accordance with MA standard operating procedures (SOP). o Blank samples shall be used during field sampling to ensure no cross contamination or laboratory artefacts. o Ensure that all laboratory hold times are met and that sample handling and transport is completed in accordance with the MA SOP.
Completeness – A measure of the amount of usable data from a data collection activity.	To ensure data set completeness, the following is required: o Confirmation that all sampling methodology was completed in general accordance with the MA SOP. o COC and receipt forms. o Results from all laboratory QA/QC samples (lab blanks, trip/spike, lab duplicates). o NATA accreditation stamp on all laboratory reports.
Comparability - The confidence that data may be considered to be equivalent for each sampling and analytical event.	Data comparability is maintained by ensuring that: o All site sampling events are undertaken following methodologies outlined in MA SOP and published guidelines. o NATA accredited laboratory methodologies shall be followed on all laboratory testing.

4.3 Investigation and Sampling Methodology and Quality Assurance/ Quality Control

Site investigation and soil sampling methodology (Table 7) was completed to meet the project DQO.

Table 7: Investigation and sampling methodology.

Activity	Detail / Comments
Fieldworks	Soil investigations were completed by MA engineers on 7 to 9 May, 2019 and involved: o Collection of 117 surface soil samples; o Collection of 1 dam silt sample; o Collection of 3 stockpile samples; o Collection of QA / QC samples for laboratory analysis. Soil sampling locations and borehole logs are provided in Attachment A and D, respectively.
Soil sampling	Soil sampling was completed by the supervising MA environmental engineer using a clean pair of nitrile gloves. Each sample was placed into laboratory-supplied, 250mL glass jar with no headspace to limit volatile loss. Samples were labelled with a unique identification number. Sampling equipment was washed with distilled water at each sample location.
QA / QC sampling	QA samples were collected as follows: o Twelve soil duplicate samples were collected during investigations and five were sent for intra-laboratory analysis. o Four soil triplicate samples were collected during investigation and two were sent for inter-laboratory analysis. o One soil trip blank and trip spike sample were used during soil sampling.
Sample handling and transportation	Sample collection, storage and transport were conducted according to MA SOP. Collected soil and groundwater samples were placed immediately into an ice chilled cooler-box. Samples were dispatched to NATA-accredited laboratories under chain of custody documentation within holding times.

4.4 Laboratory Analytical Suite

Laboratory analysis was carried out by Envirolab Pty Ltd a NATA accredited laboratory. Summary of laboratory analyses is summarised in Table 8.

Table 8: Summary of primary soil laboratory analyses.

COPC	Number of Samples Analysed
Heavy metals[1]	37 triple composites (111 discrete samples), plus 11 discrete
OCP / OPP	37 triple composites (111 discrete samples), plus 11 discrete
TRH	3 discrete
PAH	3 discrete
BTEXN	3 discrete

COPC	Number of Samples Analysed
CEC	3 discrete
pH	3 discrete

Notes:

1. Heavy metals – arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc.

5 Site Assessment Criteria

The SAC adopted for this DSI were derived from the NEPC (1999, amended 2013) National Environmental Protection (Assessment of Site Contamination) Measure.

Guideline values for individual contaminants analysed for this assessment are presented in laboratory tables in Attachment C.

Both investigation and screening levels affecting human health and environment were considered for this site investigation.

Table 9 summarises the applicability of the SAC adopted for this investigation.

Table 9: Summary of SAC.

Media	Adopted Guidelines	Applicability
Soil	ASC NEPM (1999, amended 2013)	Health Investigation Levels (HILs) HIL A – residential land use with access to soil Health Screening Levels (HSLs) HSL A & B – low – high density residential land use for clay and silt soils has been adopted as a conservative measure. Ecological Investigation Levels (EILs) Site EILs have been calculated using methodology outlined in ASC NEPM (2013). Environmental Screening Levels (ESLs) Urban residential and public open spaces Management Limits Residential, parkland and public open space Asbestos Assessed on a detect/non-detect basis.

6 Results

6.1 Field Observations

Field observations from 7 to 9 May 2019 included:

1. The site was unused and largely covered by grass, with mature trees located at the northwest corner of site.
2. Dam located in the northwest portion of site.
3. Power box was located near mature trees in northwest portion of site.
4. Stockpiles located in northwest corner of site.
5. Topsoil consisting of silty clay, with underlying alluvium up to maximum termination depth of 7.0m (MA, 2019..

6.2 Laboratory Analytical Results

The following sections summarise the results of soil laboratory analysis. Detailed tabulated results showing individual sample concentrations compared to adopted SAC are available in Attachment C. Laboratory certificate of analysis is provided in Attachment E.

Table 10: Summary of soil laboratory results.

Analyte	Results Compared to SAC
Heavy Metals	HILs
	Cadmium in composite sample 25 (SS77, SS78 and SS79) with 8.7 mg/kg was above the SAC (6.667 mg/kg).
	Discrete testing for SS77, SS78 and SS79 indicated Cadmium results below SAC.
	HSLs
	All results below SAC.
	EILs
	All results below SAC.
	ESLs
	All results below SAC.

Analyte	Results Compared to SAC
TRH/BTEXN	HILs All results below SAC. HSLs All results below SAC. ESLs All results below SAC. Management Limits All results below SAC.
OCP/OPP	HILs All results below SAC. HSLs All results below SAC. EILs All results below SAC.
PAH	HILs All results below SAC. HSLs All results below SAC. EILs All results below SAC. ESLs All results below SAC.
Asbestos	No asbestos was detected.

6.3 Quality Assurance and Quality Controls

The RPD between the sample and duplicate were not exceeded. The trip spike and blank both reported within acceptable concentrations. Therefore, the data is suitable for the purposes of the assessment. Refer to Attachment D for the data validation report.

7 Discussion and Recommendation

Initial laboratory analysis identified elevated concentration of cadmium for HILs at one testing location for a tri-composite sample (CS25). Further discrete testing of the contaminant samples that made up the composite (SS77, SS78 and SS79) indicated concentration of cadmium to be below SAC. MA requested the lab for additional checks on the discrete samples with non-detections on all these subsequent tests. The elevated level of cadmium with the composite was noted by the lab as a 'hotspot' with the original sample. Given all subsequent discrete tests have returned non-detect values, the initial composite exceedance does not require further consideration in relation to remediation or management.

Laboratory analysis of all dam silt samples were all below the SAC.

Overall the site is not considered to generally have a risk of contamination and the site is considered suitable for the proposed land use. No further investigations or remediation is considered necessary.

If any unexpected finds (such as fibro material in fill, odours or staining) are encountered during site construction works, the unexpected find will require assessment by MA to determine requirements for additional investigation and/or remedial action. If any soil material is to be removed from site, a formal waste classification assessment may be required in accordance with NSW EPA Waste Classification Guidelines (2014).

8 Limitations Statement

This DSI was undertaken in accordance with current industry standards.

It is important to note that no land contamination study can be considered to be a complete and exhaustive characterisation of a site nor can it be guaranteed that any assessment shall identify and characterise all areas of potential contamination or all past potentially contaminating land-uses. This report should not be read as a guarantee that only contamination identified shall be found on the site. Should material be exposed in future which appears to be contaminated, additional testing may be required to determine the implications for the site.

Martens & Associates Pty Ltd has undertaken this assessment for the purposes of assessing potential site contamination. No reliance on this report should be made for any other investigation or proposal. Martens & Associates Pty Ltd accepts no responsibility, and provides no guarantee regarding the characteristics of areas of the site not specifically studied in this investigation.

References

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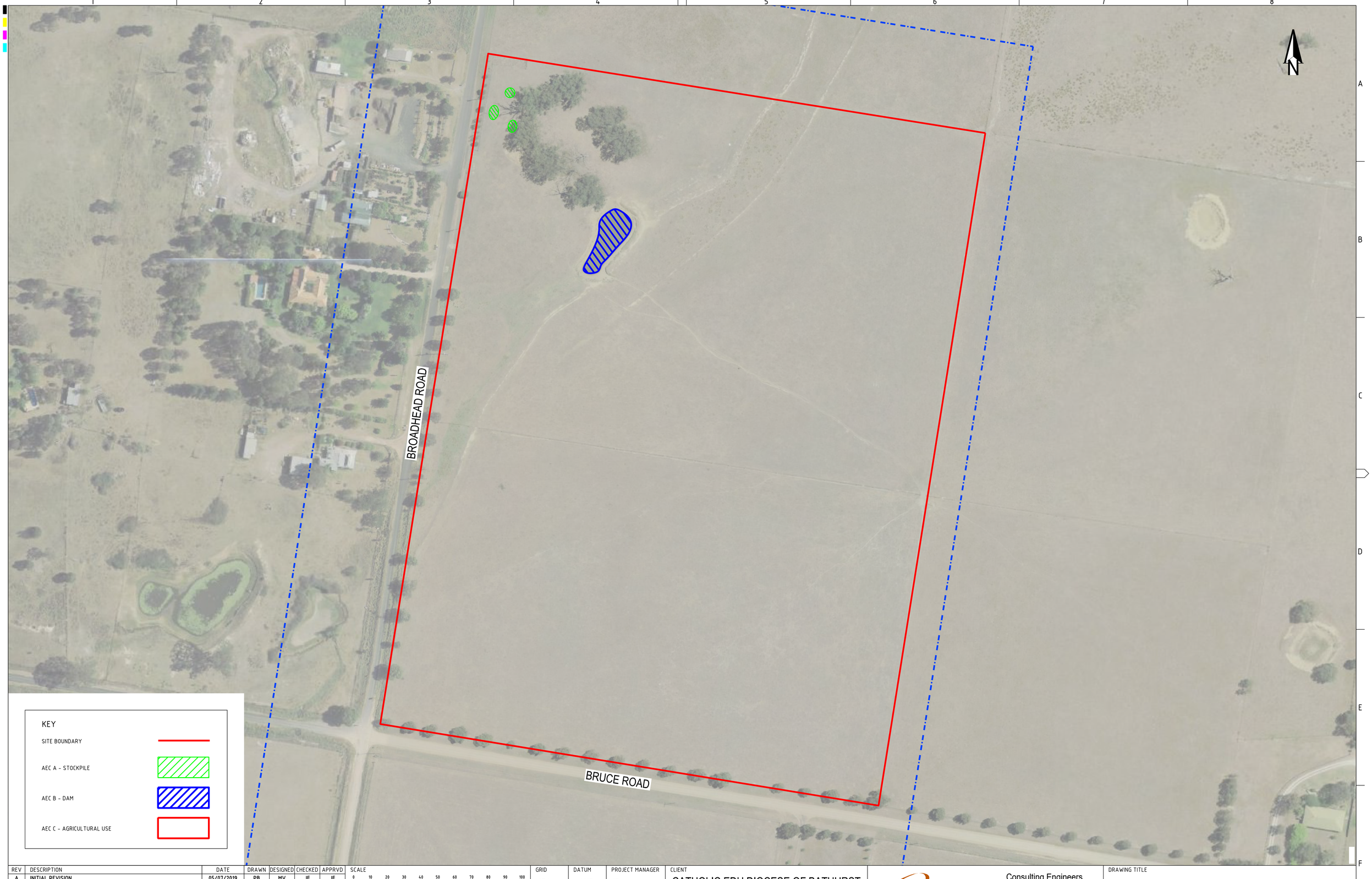
SEPP 55 Remediation of Land.

Attachment A – Site Plan and Soil Sampling Locations



KEY

SITE BOUNDARY

AEC A – STOCKPILE

AEC B – DAM

AEC C – AGRICULTURAL USE

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
A	INITIAL REVISION	05/07/2019	PB	MV	JF	JF

SCALE
0 10 20 30 40 50 60 70 80 90 100 METRES
A1 (A3) 1:1,000 (1:2,000)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	JF

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PROJECT NAME/PLANSET TITLE
ENVIRONMENTAL SERVICES
DETAILED SITE INVESTIGATION
48 BROADHEAD ROAD, SPRING FLAT, NSW

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DRAWING TITLE
AEC MAP
SOURCE: NEARMAP 2019

PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
P1907109	PS01	R02	PS01-J100	A

DRAWING ID: P1907109-PS01-R02-J100

PRINTED: --- - USER: LUU
A1 / A3 LANDSCAPE (A1LC_v02.0.01)

EAD ROAD

BROADHEAD ROAD

BRUCE ROAD

SS001 SS002 SS003 — 1
SS010 SS011 SS012 SS013 — 4
SS019 SS020 — 7
SS028 SS029 SS030 SS031 — 10
SS037 SS038 SS039 — 13
SS040 SS041 — 11
SS046 SS047 SS048 SS049 — 17
SS050 DUP 8
SS055 SS056 SS057 — 16
SS058 SS059 — 19
SS064 SS065 SS066 — 22
SS067 SS068 — 23
SS073 DUP 10 SS074 SS075 SS076 — 24
SS082 SS083 SS084 DS01 — 27
SS085 SS086 — 28
SS091 SS092 SS093 SS094 SS095 — 31
SS100 SS101 — 33
SP01 SP02 SP03 SS109 DUP 13 TRIP 5 SS110 — 33
SS102 SS103 SS104 SS111 SS112 SS113 — 35
SS119 — 34
SS004 DUP 4 TRIP 1 — 1
SS005 SS006 SS007 — 2
SS014 SS015 SS016 — 5
SS023 SS024 SS025 — 9
SS032 SS033 SS034 — 12
SS041 SS042 DUP7 TRIP 2 SS043 — 15
SS051 SS052 — 14
SS060 SS061 SS120 DUP 14 — 20
SS069 SS070 DUP9 TRIP 3 — 20
SS078 SS079 — 25
SS087 SS088 SS089 — 30
SS096 SS097 SS098 — 32
SS105 SS106 SS107 — 36
SS114 SS115 SS116 — 36
SS008 SS009 SS010 — 3
SS017 SS018 — 6
SS026 SS027 — 8
SS035 SS036 — 12
SS044 SS045 — 15
SS053 SS054 — 18
SS062 SS063 — 21
SS071 SS072 — 21
SS080 SS081 — 26
SS090 DUP 11 — 26
SS099 DUP12 TRIP 4 — 29
SS108 SS117 — 37

KEY

SITE BOUNDARY

SURFACE SAMPLE/DUP LOCATIONS

DAM SILT SAMPLE

STOCKPILE SAMPLE

REV	DESCRIPTION	DATE	DRAWN	DESIGNED	CHECKED	APPRVD
A	INITIAL REVISION	05/07/2019	PB	MV	JF	JF

SCALE
0 7.5 15.0 22.5 30.0 37.5 45.0 52.5 60.0 67.5 75.0 METRES
A1 (A3) 1:750 (1:1,500)

GRID	DATUM	PROJECT MANAGER
MGA	mAHD	JF

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PROJECT NO.	PLANSET NO.	RELEASE NO.	DRAWING NO.	REVISION
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DRAWING ID: P1907109-PS01-R02-J101

Attachment B – Laboratory Analytical Summary Tables

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	TRH							BTEX					
	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	25	25	50	50	100	100	50	0.2	0.5	1	2	1	1
NEPM 2013 Table 1A(1) HILs Res A Soil													
Site Specific EIL													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay													
0-1m		50		280				0.7	480	NL			110
1-2m		90		NL				1	NL	NL			310
2-4m		150		NL				2	NL	NL			NL
>4m		290		NL				3	NL	NL			NL
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil		180		120	1300	5600		65	105				
0-2m										125			45
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil	800		1000		3500	10000							
Field_ID													
7109/DS01	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SP01	<25	<25	<50	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
7109/SP02	<25	<25	<50	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
7109/SP03	<25	<25	<50	<50	<100	<100	<50	<0.2	<0.5	<1	<2	<1	<1
7109/SS04	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS10	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS109	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS119	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS36	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS46	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS55	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS73	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS99	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary													
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0

	PAH																		
	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of positives)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Res A Soil																			
Site Specific EIL													170						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			
0-1m													5						
1-2m													NL						
2-4m													NL						
>4m													NL						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																			
0-2m						0.7													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			
Field_ID																			
7109/DS01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SP01	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05
7109/SP02	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05
7109/SP03	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.05
7109/SS04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7109/SS99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																			
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Organochlorine Pesticides																				Halogenated Benzenes
	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Hexachlorobenzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil										240					10			6		300	10
Site Specific EIL									180												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																					
0-1m																					
1-2m																					
2-4m																					
>4m																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																					
0-2m																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																					
Field_ID																					
7109/DS01	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP01	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP02	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP03	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS04	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS10	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS109	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS119	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS36	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS46	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS55	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS73	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS99	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Statistical Summary																					
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Organophosphorous Pesticides											Pesticides
	Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Ronnel	Parathion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil			160									
Site Specific EIL												
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay												
0-1m												
1-2m												
2-4m												
>4m												
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil												
0-2m												
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil												
Field_ID												
7109/DS01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS109	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS119	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS36	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS46	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS55	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS73	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Statistical Summary												
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0

	Metals								PCBs							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil	100	20		6000	300	40	400	7400								1
Site Specific EIL	100			140	1100		130	330								
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																
0-1m																
1-2m																
2-4m																
>4m																
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																
0-2m																
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																
Field_ID																
7109/DS01	9	<0.4	10	7	8	<0.1	5	23	-	-	-	-	-	-	-	-
7109/SP01	12	<0.4	14	12	14	<0.1	10	33	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP02	6	<0.4	16	6	23	<0.1	5	68	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SP03	7	<0.4	14	6	15	<0.1	6	33	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
7109/SS04	21	<0.4	14	15	11	<0.1	10	52	-	-	-	-	-	-	-	-
7109/SS10	10	<0.4	11	12	12	<0.1	12	43	-	-	-	-	-	-	-	-
7109/SS109	6	<0.4	11	6	8	<0.1	4	35	-	-	-	-	-	-	-	-
7109/SS119	10	<0.4	11	7	8	<0.1	5	36	-	-	-	-	-	-	-	-
7109/SS36	12	<0.4	10	11	13	<0.1	10	42	-	-	-	-	-	-	-	-
7109/SS46	11	<0.4	12	9	11	<0.1	7	31	-	-	-	-	-	-	-	-
7109/SS55	10	<0.4	11	8	11	<0.1	8	24	-	-	-	-	-	-	-	-
7109/SS73	12	<0.4	15	6	10	<0.1	6	21	-	-	-	-	-	-	-	-
7109/SS99	11	<0.4	11	10	11	<0.1	8	39	-	-	-	-	-	-	-	-
Statistical Summary																
Number of Detects	13	0	13	13	13	0	13	13	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	TRH							BTEX					
	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	25	25	50	50	100	100	50	0.2	0.5	1	2	1	1
NEPM 2013 Table 1A(1) HILs Res A Soil													
Site Specific EIL													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay													
0-1m		16.667		93.333				0.2333	160	NL			36.667
1-2m		30		NL				0.3333	NL	NL			103.33
2-4m		50		NL				0.6667	NL	NL			NL
>4m		96.667		NL				1	NL	NL			NL
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil		60		40	433.33	1866.7		21.667	35				
0-2m										41.667			15
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil	266.67		333.33		1166.7	3333.3							
Field_ID													
Composite 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 10	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 11	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 12	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 13	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 14	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 15	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 16	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 17	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 18	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 19	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 20	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 21	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 22	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 23	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 24	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 25	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 26	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 27	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 28	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 29	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 3	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 30	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 31	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 32	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 33	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 34	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 35	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 36	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 37	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 4	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 5	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 6	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 7	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 8	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 9	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary													
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0

	PAH																		
	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of positives)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Res A Soil																			
Site Specific EIL													56.667						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			
0-1m													1.6667						
1-2m													NL						
2-4m													NL						
>4m													NL						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																			
0-2m						0.2333													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			
Field_ID																			
Composite 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistical Summary																			
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	PCBs							
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil								0.3333
Site Specific EIL								
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay								
0-1m								
1-2m								
2-4m								
>4m								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil								
0-2m								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil								
Field_ID								
Composite 1	-	-	-	-	-	-	-	-
Composite 10	-	-	-	-	-	-	-	-
Composite 11	-	-	-	-	-	-	-	-
Composite 12	-	-	-	-	-	-	-	-
Composite 13	-	-	-	-	-	-	-	-
Composite 14	-	-	-	-	-	-	-	-
Composite 15	-	-	-	-	-	-	-	-
Composite 16	-	-	-	-	-	-	-	-
Composite 17	-	-	-	-	-	-	-	-
Composite 18	-	-	-	-	-	-	-	-
Composite 19	-	-	-	-	-	-	-	-
Composite 2	-	-	-	-	-	-	-	-
Composite 20	-	-	-	-	-	-	-	-
Composite 21	-	-	-	-	-	-	-	-
Composite 22	-	-	-	-	-	-	-	-
Composite 23	-	-	-	-	-	-	-	-
Composite 24	-	-	-	-	-	-	-	-
Composite 25	-	-	-	-	-	-	-	-
Composite 26	-	-	-	-	-	-	-	-
Composite 27	-	-	-	-	-	-	-	-
Composite 28	-	-	-	-	-	-	-	-
Composite 29	-	-	-	-	-	-	-	-
Composite 3	-	-	-	-	-	-	-	-
Composite 30	-	-	-	-	-	-	-	-
Composite 31	-	-	-	-	-	-	-	-
Composite 32	-	-	-	-	-	-	-	-
Composite 33	-	-	-	-	-	-	-	-
Composite 34	-	-	-	-	-	-	-	-
Composite 35	-	-	-	-	-	-	-	-
Composite 36	-	-	-	-	-	-	-	-
Composite 37	-	-	-	-	-	-	-	-
Composite 4	-	-	-	-	-	-	-	-
Composite 5	-	-	-	-	-	-	-	-
Composite 6	-	-	-	-	-	-	-	-
Composite 7	-	-	-	-	-	-	-	-
Composite 8	-	-	-	-	-	-	-	-
Composite 9	-	-	-	-	-	-	-	-
Statistical Summary								
Number of Detects	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0

	Organochlorine Pesticides																			
	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil										80					3.33333333			2		100
Site Specific EIL									60											
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																				
0-1m																				
1-2m																				
2-4m																				
>4m																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil																				
0-2m																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				
Field_ID																				
Composite 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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 10	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 11	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 12	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 13	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 14	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 15	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 16	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 17	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 18	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 19	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 2	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 20	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 21	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 22	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 23	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 24	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 25	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 26	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 27	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 28	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 29	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 3	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 30	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 31	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 32	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 33	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 34	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 35	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 36	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 37	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 4	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 5	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 6	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 7	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 8	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Composite 9	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Statistical Summary																				
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Halogenated Benzenes	Organophosphorous Pesticides											Pesticides
	Hexachlorobenzene	Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Ronnel	Parathion
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil	10			53.333									
Site Specific EIL													
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay													
0-1m													
1-2m													
2-4m													
>4m													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil													
0-2m													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil													
Field_ID													
Composite 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	<0.1
Composite 10	<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
Composite 11	<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
Composite 12	<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
Composite 13	<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
Composite 14	<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
Composite 15	<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
Composite 16	<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
Composite 17	<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
Composite 18	<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
Composite 19	<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
Composite 2	<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
Composite 20	<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
Composite 21	<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
Composite 22	<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
Composite 23	<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
Composite 24	<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
Composite 25	<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
Composite 26	<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
Composite 27	<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
Composite 28	<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
Composite 29	<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
Composite 3	<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
Composite 30	<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
Composite 31	<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
Composite 32	<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
Composite 33	<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
Composite 34	<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
Composite 35	<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
Composite 36	<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
Composite 37	<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
Composite 4	<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
Composite 5	<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
Composite 6	<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
Composite 7	<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
Composite 8	<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
Composite 9	<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
Statistical Summary													
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0

	Metals							
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	1	0.1	1	1
NEPM 2013 Table 1A(1) HILs Res A Soil	33.333	6.6667		2000	100	13.333	133.33	2466.7
Site Specific EIL	33.333			46.667	366.67		43.333	110
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay								
0-1m								
1-2m								
2-4m								
>4m								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil								
0-2m								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil								
Field_ID								
Composite 1	14	<0.4	13	15	14	<0.1	13	55
Composite 10	8	<0.4	8	8	9	<0.1	7	35
Composite 11	8	<0.4	8	8	9	<0.1	7	38
Composite 12	10	<0.4	10	9	11	<0.1	7	35
Composite 13	10	<0.4	11	11	11	<0.1	9	37
Composite 14	10	<0.4	10	9	11	<0.1	9	39
Composite 15	10	<0.4	11	11	12	<0.1	9	39
Composite 16	9	<0.4	10	8	10	<0.1	6	37
Composite 17	10	<0.4	10	10	11	<0.1	9	43
Composite 18	9	<0.4	9	11	11	<0.1	8	51
Composite 19	10	<0.4	11	9	10	<0.1	6	42
Composite 2	15	<0.4	11	10	11	<0.1	9	48
Composite 20	7	<0.4	9	6	9	<0.1	5	32
Composite 21	5	<0.4	7	6	7	<0.1	4	31
Composite 22	10	<0.4	10	7	9	<0.1	6	26
Composite 23	9	<0.4	9	8	10	<0.1	5	28
Composite 24	10	<0.4	10	8	10	<0.1	5	23
Composite 25	8	8.7	9	9	11	<0.1	6	31
Composite 26	7	<0.4	8	8	10	<0.1	5	27
Composite 27	10	<0.4	14	9	11	<0.1	7	38
Composite 28	10	<0.4	11	9	11	<0.1	6	28
Composite 29	10	<0.4	11	9	11	<0.1	6	31
Composite 3	12	<0.4	11	14	12	<0.1	12	51
Composite 30	11	<0.4	11	11	12	<0.1	8	42
Composite 31	10	<0.4	13	5	9	<0.1	6	23
Composite 32	10	<0.4	11	11	13	<0.1	8	38
Composite 33	8	<0.4	11	6	8	<0.1	4	22
Composite 34	8	<0.4	12	6	9	<0.1	4	30
Composite 35	9	<0.4	13	11	13	<0.1	8	45
Composite 36	9	<0.4	11	10	12	<0.1	7	33
Composite 37	9	<0.4	10	10	11	<0.1	8	35
Composite 4	11	<0.4	11	24	11	<0.1	29	62
Composite 5	7	<0.4	8	7	9	<0.1	6	33
Composite 6	24	<0.4	14	18	25	<0.1	16	61
Composite 7	10	<0.4	11	12	12	<0.1	11	42
Composite 8	12	<0.4	10	11	11	<0.1	9	48
Composite 9	9	<0.4	9	10	11	<0.1	8	44
Statistical Summary								
Number of Detects	37	1	37	37	37	0	37	37
Number of Guideline Exceedances(Detects Only)	0	1	0	0	0	0	0	0

Attachment C – Data Validation Report

DATA VALIDATION REPORT: 48 Broadhead Road, Mudgee, NSW

1. Sample Handling

	Yes	No (Comments below)
a. Were sample holding times met?	✓	
b. Were samples in proper custody between the field and reaching the laboratory?	✓	
c. Were the samples properly and adequately preserved?	✓	
d. Were the samples received by the laboratory in good condition?	✓	

COMMENTS

Sample handling is:

✓	**Satisfactory**
	Partially Satisfactory
	Unsatisfactory

DATA VALIDATION REPORT: 48 Broadhead Road, Mudgee, NSW

2. Precision / Accuracy Statement

	Yes	No (Comments below)
a. Was a NATA registered laboratory used?	✓	
b. Did the laboratory perform the requested tests?	✓	
c. Were laboratory methods adopted NATA endorsed?	✓	
d. Were appropriate test procedures followed?	✓	
e. Were reporting limits satisfactory?	✓	
f. Was the NATA Seal on the reports?	✓	
g. Were reports signed by an authorised person?	✓	

COMMENTS

Precision / Accuracy of the Laboratory Report:	✓	**Satisfactory**
		Partially Satisfactory
		Unsatisfactory

3. Field Quality Assurance / Quality Control (QA/QC)

	Media	Number
a. Number of Primary Samples analysed *(does not include duplicates)*	Soil:	122
	Water:	-
	Material	-
b. Number of days of sampling	3	

c. Number and Type of QA/QC Samples analysed	Soil	Water
Intra-Laboratory Field Duplicates	5	-
Inter-Laboratory Field triplicates	2	-
Trip Blanks	1	-
Field Rinsate	-	-
Other (Field Blanks, Spikes, etc.)	-	-

Comments

DATA VALIDATION REPORT: 48 Broadhead Road, Mudgee, NSW

Field Duplicates

	Yes	No (Comments below)
Adequate Numbers of intra-laboratory field duplicates analysed?	✓	
Adequate Numbers of inter-laboratory field duplicates analysed?	✓	-
Were field duplicate RPDs within Control Limits?		
i. Organics	N/A	
ii. Metals / Inorganics		✓
iii. Nutrients	N/A	

COMMENTS

If there is variation, sample is heterogenous.

DATA VALIDATION REPORT: 48 Broadhead Road, Mudgee, NSW

Summary of Quality Assurance / Quality Control (QA/QC)

QA/QC Type	Satisfactory	Partially Satisfactory	Unsatisfactory
Sample handling	✓		
Precision / Accuracy of the Laboratory Report	✓		
Field QA / QC	✓		
Laboratory Internal QA / QC	✓		

Data Usability

1. Data directly usable
2. Data usable with the following corrections/modifications ✓
   (see comment below)
3. Data not usable.

COMMENTS

Data is useable, but note that material is heterogenous.

Field Duplicates (SOIL)
Filter: ALL

	SDG	ENVIROLAB 2019-05-10T00:00:00	ENVIROLAB 2019-05-10T00:00:00		ENVIROLAB 2019-05-10T00:00:00	ENVIROLAB 2019-05-10T00:00:00		ENVIROLAB 2019-05-10T00:00:00	ENVIROLAB 2019-05-10T00:00:00		ENVIROLAB 2019-05-10T00:00:00	ENVIROLAB 2019-05-10T00:00:00	
	Field ID	7109/SS04	7109/DUP04	**RPD**	7109/SS10	7109/DUP05	**RPD**	7109/SS36	7109/DUP06	**RPD**	7109/SS99	7109/DUP12	**RPD**
	Sampled Date/Time	9/05/2019	9/05/2019		9/05/2019	9/05/2019		9/05/2019	9/05/2019		9/05/2019	9/05/2019	
Chem_Grd	**ChemNam**	**Units**	**EQL**										
Inorganics	Moisture	%	0.1	10.0	8.6	15	12.0	10.0	18	12.0	13.0	8	11.0	11.0	0
Metals	Arsenic	mg/kg	4	21.0	10.0	71	10.0	11.0	10	12.0	14.0	15	11.0	11.0	0
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0
	Chromium	mg/kg	1	14.0	10.0	33	11.0	12.0	9	10.0	11.0	10	11.0	12.0	9
	Copper	mg/kg	1	15.0	11.0	31	12.0	13.0	8	11.0	12.0	9	10.0	11.0	10
	Lead	mg/kg	1	11.0	10.0	10	12.0	12.0	0	13.0	13.0	0	11.0	12.0	9
	Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	1	10.0	10.0	0	12.0	12.0	0	10.0	10.0	0	8.0	9.0	12
	Zinc	mg/kg	1	52.0	50.0	4	43.0	44.0	2	42.0	45.0	7	39.0	39.0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Filter: ALL

Attachment D – Borehole Logs

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	07/05/2019	COMPLETED	07/05/2019	**REF BH101**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	490.75 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		490.70	/0.1/S/1 D 0.10 m			CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace subangular fine gravels; trace rootlets			TOPSOIL
	M				/0.3/S/1 D 0.30 m			CI	Silty CLAY: medium plasticity; brown; with sand; trace subangular fine gravels.		VSt	ALLUVIUM
	H			0.60	/0.5/S/1 D 0.50 m							
AD/T	L			490.15				CI-CH	Medium to high plasticity; pale brown; with subangular fine to medium gravels.	M (<<PL)	H	0.60: V-bit refusal.
			1		/1.0/S/1 D 1.00 m /1.0/S/2 D 1.00 m							
					/1.3/S/1 D 1.30 m							
				1.50					Hole Terminated at 1.50 m (Target depth reached)			
			2									
			3									
			4									
			5									
			6									
			7									

EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	07/05/2019	COMPLETED	07/05/2019	**REF BH102**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	490.35 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		490.30	/0.1/S/1 D 0.10 m /0.1/S/2 D 0.10 m /0.25/S/1 D 0.25 m			CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace rootlets.			TOPSOIL
	M							CI	Silty CLAY: medium plasticity; brown; with sand; trace subangular gravels.		VSt	ALLUVIUM
				0.50								
	H			489.85				CI-CH	Medium to high plasticity; brown.	M (<<PL)		0.50: V-bit refusal.
AD/T	M		1		/1.0/S/1 D 1.00 m /1.3/S/1 D 1.30 m						H	
				1.50					Hole Terminated at 1.50 m (Target depth reached)			
			2									
			3									
			4									
			5									
			6									
			7									

EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	07/05/2019	COMPLETED	07/05/2019	**REF BH103**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	490.65 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		490.60	/0.1/S/1 D 0.10 m /0.25/S/1 D 0.25 m			CI CI	TOPSOIL: Silty CLAY: medium plasticity; pale brown; trace rootlets.		VSt	TOPSOIL ALLUVIUM
	H			*0.50*					Silty CLAY: medium plasticity; pale brown; with sand; trace subangular fine gravels.			
				490.15				CI- CH	Medium to high plasticity; red and brown.			0.50: V-bit refusal.
AD/T	L			*0.80*						M (<<PL)		
				489.85				CI	Medium plasticity; with subrounded medium gravels.		H	
	M		1	*1.20*					With subrounded fine gravels.			
	H			489.45 *1.50*					Hole Terminated at 1.50 m (Target depth reached)			
			2									
			3									
			4									
			5									
			6									
			7									

EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	07/05/2019	COMPLETED	07/05/2019	**REF BH104**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.75 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		488.70	/0.1/S/1 D 0.10 m 0.25/S/1 D 0.25 m			CI	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets.			TOPSOIL
	H			*0.50*				CI	Silty CLAY: medium plasticity; red and brown; with sand; trace fine subangular gravels.		VSt	ALLUVIUM
AD/T	L		1	488.25				CI-CH	Medium to high plasticity.	M (<<PL)		0.50: V-bit refusal.
	M										H	
	H			*1.50*					Hole Terminated at 1.50 m (Target depth reached)			
			2									
			3									
			4									
			5									
			6									
			7									

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH105**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	489.8 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 3.60 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	M	Not Encountered		489.75				CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace rootlets.		VSt - H	TOPSOIL
								CI	Silty CLAY: medium plasticity; brown.			ALLUVIUM
	H			*0.70* 489.10								0.50: V-bit refusal.
AD/T	M		1						Red and brown; trace subangular fine to medium gravels.			
				1.30 488.50					With sand; trace subrounded to subangular medium gravels.			
	M									M (<<PL)		
	H		2								H	
	H		3									
				3.60					Hole Terminated at 3.60 m			3.60: TC-bit refusal.
			4									
			5									
			6									
			7									

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH106**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	489.5 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 2.70 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L M H	Not Encountered	0	489.45				CI CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace subangular fine gravels. trace rootlets.		VSt	TOPSOIL ALLUVIUM
				0.60					Silty CLAY: medium plasticity; orange and brown; with subangular fine gravels.			
				488.90					With sand.			0.60: V-bit refusal.
AD/T	M		1							M (<<PL)	H	
			2	*2.70*								
									Hole Terminated at 2.70 m			2.70: TC-bit refusal.
			3									
			4									
			5									
			6									
			7									

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH107**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	489.24 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	M	Not Encountered		489.19				CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace subangular fine gravels. trace rootlets.			TOPSOIL
AD/T	H							CI	Silty CLAY: medium plasticity; red and brown.			ALLUVIUM
	L		1							M (<<PL)	H	0.20: V-bit refusal.
	M											
	H			1.50					Hole Terminated at 1.50 m			1.50: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH108**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.75 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.20 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered	0	488.70	P7109/108/0.1/S/1 D 0.10 m			CI-CH	TOPSOIL: Silty CLAY: medium to high plasticity; grey and brown; trace rootlets.		VSt - H	TOPSOIL
				0.40 488.35	P7109/108/0.25/S/1 D 0.25 m			CI-CH	Silty CLAY: medium to high plasticity; grey.			ALLUVIUM
AD/T	M				P7109/108/0.5/S/1 D 0.50 m			CI	Medium plasticity; yellow and brown.	M (<<PL)	H	0.40: V-bit refusal
	H		1	*1.00* 487.75 *1.20*				CH	CLAY: high plasticity; yellow and brown.			
									Hole Terminated at 1.20 m			1.20: TC-bit refusal.

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH109**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.77 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.70 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L M	Not Encountered	0	488.72				CI	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets.		VSt	TOPSOIL
								CL-CI	Silty CLAY: low to medium plasticity; grey.			ALLUVIUM
				0.40								
				488.37				CL-CI	CLAY: low to medium plasticity; yellow and brown; with sand; trace fine subrounded gravels.			0.40: V-bit refusal.
				0.80								
AD/T			1	487.97				CI-CH	Medium to high plasticity.	M (<<PL)	H	
				1.70								
									Hole Terminated at 1.70 m			1.70: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	08/05/2019	COMPLETED	08/05/2019	**REF BH110**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.89 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 7.00 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered	0	0.20 488.69				CI-CH	TOPSOIL: Silty CLAY: medium to high plasticity; grey; trace rootlets.		VSt	TOPSOIL
								CI-CH	Silty CLAY: medium to high plasticity; grey.			ALLUVIUM
	M		1					CI	CLAY: medium plasticity; orange and brown; with subangular fine gravels; with sand.			
	H											1.30: V-bit refusal.
				1.50 487.39					Grading to red and brown; with subangular medium gravels.			
			2									
				2.60 486.29					Red, orange and white; with subangular fine gravels.			
				3.00 485.89					Red and brown; trace subrounded medium gravels.			
AD/T	M		3							M (<<PL)	H	
			4									
				4.50 484.39				CI-CH	Medium to high plasticity; red, orange and white; trace sand.			
			5	5.00 483.89				CH	High plasticity; red and brown; no sand.			
			6									
			7	7.00					Hole Terminated at 7.00 m (Target depth reached)			

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH111**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	487.79 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.90 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		487.74				CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace rootlets.		VSt	TOPSOIL
	H			0.50				CI	Silty CLAY: medium plasticity; brown; trace subangular fine gravels.			ALLUVIUM
AD/T	M			487.29					Orange and brown.			0.70: V-bit refusal.
	H		1	0.90 486.89					With subrounded to subangular fine to medium gravels.	M (<<PL)	H	
				1.90					Hole Terminated at 1.90 m			1.90: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH112**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	487.3 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 4.00 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		487.25				CI	TOPSOIL: Silty CLAY: medium plasticity; brown; trace rootlets.		VSt	TOPSOIL
	H			*0.40* 486.90				CI	Silty CLAY: medium plasticity; brown; trace subangular fine gravels. Red and brown.			ALLUVIUM
AD/T	L		1	*1.50* 485.80				CI	CLAY: medium plasticity; red and brown.			0.50: V-bit refusal.
	M		2	*1.90* 485.40					Brown.	M (<<PL)	H	
			3									
			4	*4.00*					Hole Terminated at 4.00 m			4.00: TC-bit refusal.
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH113**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	487.26 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		487.21	P7109/113/0.1/S/1 D 0.10 m			CI	TOPSOIL: Silty CLAY: medium plasticity; grey and brown; trace rootlets.		VSt	TOPSOIL
	H				P7109/113/0.25/S/1 D 0.25 m			CL	Silty CLAY: low plasticity; red and brown; trace subangular fine gravels; with sand.			ALLUVIUM
					P7109/113/0.5/S/1 D 0.50 m							0.50: V-bit refusal.
AD/T	L									M (<<PL)	H	
			1	*1.00* 486.26	P7109/113/1.0/S/1 D 1.00 m			CI-CH	Grading to medium to high plasticity.			
	H			*1.50*					Hole Terminated at 1.50 m			1.50: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH114**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.27 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.40 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L M H	Not Encountered		488.22	P7109/114/0.1/S/1 D 0.10 m			CI	TOPSOIL: Silty CLAY: medium plasticity; grey.			TOPSOIL
				0.40	P7109/114/0.25/S/1 D 0.25 m			CI-CH	Silty CLAY: medium to high plasticity; orange and brown.		VSt - H	ALLUVIUM
AD/T	L			487.87	P7109/114/0.5/S/1 D 0.50 m				Trace subangular fine gravels.	M (<<PL)		0.40: V-bit refusal.
	H		1		P7109/114/1.0/S/1 D 1.00 m						H	
				1.40					Hole Terminated at 1.40 m			1.40: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH115**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	488.32 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.50 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		488.27	P7109/115/0.1/S/1 D 0.10 m			CI	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets.		VSt - H	TOPSOIL
	H			*0.40* 487.92	P7109/115/0.25/S/1 D 0.25 m			CI	Silty CLAY: low plasticity; orange and brown; with fine to medium gravels.			ALLUVIUM
					P7109/115/0.5/S/1 D 0.50 m				Red and brown; with medium to coarse gravels.			0.50: V-bit refusal.
AD/T	M		1		P7109/115/1.0/S/1 D 1.00 m					M (<<PL)	H	
				1.50					Hole Terminated at 1.50 m			1.50: TC-bit refusal.
			2									
			3									
			4									
			5									
			6									
			7									

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CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH116**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	487.52 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 1.70 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L M H	Not Encountered	1	487.47 *0.45* 487.07 *1.70*				CI CI	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets. Silty CLAY: medium plasticity; grey; trace subangular fine gravels. Orange and brown; with subrounded to subangular medium to coarse gravels.	M (<<PL)	VSt H	TOPSOIL ALLUVIUM 0.45: V-bit refusal.
AD/T	L H								Hole Terminated at 1.70 m			1.70: TC-bit refusal.

EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

MARTENS & ASSOCIATES PTY LTD
Suite 201, 20 George St. Hornsby, NSW 2077 Australia
Phone: (02) 9476 9999 Fax: (02) 9476 8767
mail@martens.com.au WEB: http://www.martens.com.au

Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH117**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	486.91 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 0.60 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L H	Not Encountered		486.86 *0.60*				CI CI-CH	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets. Silty CLAY: medium to high plasticity; brown; trace subangular fine gravels.	M (<<PL)	VSt H	TOPSOIL ALLUVIUM
									Hole Terminated at 0.60 m			0.60: V-bit refusal.

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EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

martens

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH118**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	487 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 0.75 m depth	NORTHING		ASPECT	East	SLOPE 5-10%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	L	Not Encountered		486.95	P7109/118/0.1/S/1 D 0.10 m P7109/118/0.25/S/1 D 0.25 m P7109/118/0.5/S1 D 0.50 m			CI CI-CH	TOPSOIL: Silty CLAY: medium plasticity; brown; trace rootlets. Silty CLAY: medium to high plasticity; brown; with subangular fine gravels.	M (<<PL)	VSt	TOPSOIL ALLUVIUM
	H			*0.75*					Hole Terminated at 0.75 m		H	0.75: V-bit refusal.

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EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - BOREHOLE

CLIENT	Catholic Education Diocese of Bathurst		COMMENCED	09/05/2019	COMPLETED	09/05/2019	**REF BH119**
PROJECT	Geotechnical and Salinity Assessment		LOGGED	CGL/MV	CHECKED	RE	Sheet 1 OF 1
SITE	48 Broadhead Road, Spring Flat, NSW		GEOLOGY	Quaternary Deposits	VEGETATION	Grass	PROJECT NO. P1907109
EQUIPMENT		4WD ute-mounted hydraulic drill rig	EASTING		RL SURFACE	484.19 m	DATUM AHD
EXCAVATION DIMENSIONS		Ø100 mm x 0.30 m depth	NORTHING		ASPECT	Northeast	SLOPE <2%

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS / ASCS CLASSIFICATION	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/V	H	Not Encountered		484.14 *0.30*	P7109/119/0.1/S/1 D 0.10 m P7109/119/0.25/S/1 D 0.25 m P7109/119/0.3/S/1 D 0.30 m			CI CI-CH	TOPSOIL: Silty CLAY: medium plasticity; grey; trace rootlets. Silty CLAY: medium to high plasticity; brown. Hole Terminated at 0.30 m	M (<<PL)	VSt and H	TOPSOIL ALLUVIUM 0.30: V-bit refusal.

EXCAVATION LOG TO BE READ IN CONJUCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

MARTENS & ASSOCIATES PTY LTD
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Engineering Log - BOREHOLE

Attachment E – Laboratory Certificate of Analysis

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 217283

Client Details

Client	Martens & Associates Pty Ltd
Attention	Jeff Fulton, Matt Vaughan
Address	Suite 201, 20 George St, Hornsby, NSW, 2077

Sample Details

Your Reference	**P1907109, St Matthew Catholic School, Mudgee**
Number of Samples	176 Soil
Date samples received	10/05/2019
Date completed instructions received	10/05/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	17/05/2019
Date of Issue	17/05/2019

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Senior Asbestos Analyst
Priya Samarawickrama, Senior Chemist
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		217283-118	217283-119	217283-120	217283-131	217283-132
Your Reference	UNITS	7109/SP01	7109/SP02	7109/SP03	Trip Spike	Trip Blank
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	17/05/2019	17/05/2019	17/05/2019	17/05/2019	17/05/2019
TRH C_6 - C_9	mg/kg	<25	<25	<25	[NA]	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	[NA]	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	93%	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	92%	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	93%	<1
m+p-xylene	mg/kg	<2	<2	<2	93%	<2
o-Xylene	mg/kg	<1	<1	<1	92%	<1
naphthalene	mg/kg	<1	<1	<1	[NA]	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	100	106	107	90	106

svTRH (C10-C40) in Soil				
Our Reference		217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50
Surrogate o-Terphenyl	%	88	88	90

PAHs in Soil				
Our Reference		217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019
Naphthalene	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	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	92	93	96

Organochlorine Pesticides in soil						
Our Reference		217283-9	217283-112	217283-113	217283-114	217283-115
Your Reference	UNITS	7109/SS10	7109/SS04	7109/SS36	7109/SS46	7109/SS73
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	97	96	96	95

Organochlorine Pesticides in soil						
Our Reference		217283-116	217283-117	217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SS109	7109/DS01	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	97	99	102	103

Organochlorine Pesticides in soil						
Our Reference		217283-133	217283-134	217283-135	217283-140	217283-141
Your Reference	UNITS	7109/SS55	7109/SS99	7109/SS119	Composite 1	Composite 2
Composite Reference		-	-	-	1 + 2 + 3	4 + 5 + 6
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	93	74	94	103

Organochlorine Pesticides in soil						
Our Reference		217283-142	217283-143	217283-144	217283-145	217283-146
Your Reference	UNITS	Composite 3	Composite 4	Composite 5	Composite 6	Composite 7
Composite Reference		7 + 8 + 9	10 + 11 + 12	13 + 14 + 15	16 + 17 + 18	19 + 20 + 21
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	97	97	94	103

Organochlorine Pesticides in soil						
Our Reference		217283-147	217283-148	217283-149	217283-150	217283-151
Your Reference	UNITS	Composite 8	Composite 9	Composite 10	Composite 11	Composite 12
Composite Reference		22 + 23 + 24	25 + 26 + 27	28 + 29 + 30	31 + 32 + 33	34 + 35 + 36
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	97	94	95	90

Organochlorine Pesticides in soil						
Our Reference		217283-152	217283-153	217283-154	217283-155	217283-156
Your Reference	UNITS	Composite 13	Composite 14	Composite 15	Composite 16	Composite 17
Composite Reference		37 + 38 + 39	40 + 41 + 42	43 + 44 + 45	46 + 47 + 48	49 + 50 + 51
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	107	81	106	101

Organochlorine Pesticides in soil						
Our Reference		217283-157	217283-158	217283-159	217283-160	217283-161
Your Reference	UNITS	Composite 18	Composite 19	Composite 20	Composite 21	Composite 22
Composite Reference		52 + 53 + 54	55 + 56 + 57	58 + 59 + 60	61 + 62 + 63	64 + 65 + 66
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	83	94	96	94	94

Organochlorine Pesticides in soil						
Our Reference		217283-162	217283-163	217283-164	217283-165	217283-166
Your Reference	UNITS	Composite 23	Composite 24	Composite 25	Composite 26	Composite 27
Composite Reference		67 + 68 + 69	70 + 71 + 72	73 + 74 + 75	76 + 77 + 78	79 + 80 + 81
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	108	96	94	94	108

Organochlorine Pesticides in soil						
Our Reference		217283-167	217283-168	217283-169	217283-170	217283-171
Your Reference	UNITS	Composite 28	Composite 29	Composite 30	Composite 31	Composite 32
Composite Reference		82 + 83 + 84	85 + 86 + 87	88 + 89 + 90	91 + 92 + 93	94 + 95 + 96
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	79	79	84	93

Organochlorine Pesticides in soil						
Our Reference		217283-172	217283-173	217283-174	217283-175	217283-176
Your Reference	UNITS	Composite 33	Composite 34	Composite 35	Composite 36	Composite 37
Composite Reference		97 + 98 + 99	100 + 101 + 102	103 + 104 + 105	106 + 107 + 108	109 + 110 + 111
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	83	91

Organophosphorus Pesticides						
Our Reference		217283-9	217283-112	217283-113	217283-114	217283-115
Your Reference	UNITS	7109/SS10	7109/SS04	7109/SS36	7109/SS46	7109/SS73
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	97	96	96	95

Organophosphorus Pesticides						
Our Reference		217283-116	217283-117	217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SS109	7109/DS01	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	105	97	99	102	103

Organophosphorus Pesticides						
Our Reference		217283-133	217283-134	217283-135	217283-140	217283-141
Your Reference	UNITS	7109/SS55	7109/SS99	7109/SS119	Composite 1	Composite 2
Composite Reference		-	-	-	1 + 2 + 3	4 + 5 + 6
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	93	74	94	103

Organophosphorus Pesticides						
Our Reference		217283-142	217283-143	217283-144	217283-145	217283-146
Your Reference	UNITS	Composite 3	Composite 4	Composite 5	Composite 6	Composite 7
Composite Reference		7 + 8 + 9	10 + 11 + 12	13 + 14 + 15	16 + 17 + 18	19 + 20 + 21
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	92	97	97	94	103

Organophosphorus Pesticides						
Our Reference		217283-147	217283-148	217283-149	217283-150	217283-151
Your Reference	UNITS	Composite 8	Composite 9	Composite 10	Composite 11	Composite 12
Composite Reference		22 + 23 + 24	25 + 26 + 27	28 + 29 + 30	31 + 32 + 33	34 + 35 + 36
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	97	94	95	90

Organophosphorus Pesticides						
Our Reference		217283-152	217283-153	217283-154	217283-155	217283-156
Your Reference	UNITS	Composite 13	Composite 14	Composite 15	Composite 16	Composite 17
Composite Reference		37 + 38 + 39	40 + 41 + 42	43 + 44 + 45	46 + 47 + 48	49 + 50 + 51
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	107	81	106	101

Organophosphorus Pesticides						
Our Reference		217283-157	217283-158	217283-159	217283-160	217283-161
Your Reference	UNITS	Composite 18	Composite 19	Composite 20	Composite 21	Composite 22
Composite Reference		52 + 53 + 54	55 + 56 + 57	58 + 59 + 60	61 + 62 + 63	64 + 65 + 66
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	83	94	96	94	94

Organophosphorus Pesticides						
Our Reference		217283-162	217283-163	217283-164	217283-165	217283-166
Your Reference	UNITS	Composite 23	Composite 24	Composite 25	Composite 26	Composite 27
Composite Reference		67 + 68 + 69	70 + 71 + 72	73 + 74 + 75	76 + 77 + 78	79 + 80 + 81
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	108	96	94	94	108

Organophosphorus Pesticides						
Our Reference		217283-167	217283-168	217283-169	217283-170	217283-171
Your Reference	UNITS	Composite 28	Composite 29	Composite 30	Composite 31	Composite 32
Composite Reference		82 + 83 + 84	85 + 86 + 87	88 + 89 + 90	91 + 92 + 93	94 + 95 + 96
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	79	79	84	93

Organophosphorus Pesticides						
Our Reference		217283-172	217283-173	217283-174	217283-175	217283-176
Your Reference	UNITS	Composite 33	Composite 34	Composite 35	Composite 36	Composite 37
Composite Reference		97 + 98 + 99	100 + 101 + 102	103 + 104 + 105	106 + 107 + 108	109 + 110 + 111
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	83	91

PCBs in Soil				
Our Reference		217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	99	102	103

Acid Extractable metals in soil						
Our Reference		217283-9	217283-112	217283-113	217283-114	217283-115
Your Reference	UNITS	7109/SS10	7109/SS04	7109/SS36	7109/SS46	7109/SS73
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	21	12	11	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	14	10	12	15
Copper	mg/kg	12	15	11	9	6
Lead	mg/kg	12	11	13	11	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	10	10	7	6
Zinc	mg/kg	43	52	42	31	21

Acid Extractable metals in soil						
Our Reference		217283-116	217283-117	217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SS109	7109/DS01	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	6	9	12	6	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	10	14	16	14
Copper	mg/kg	6	7	12	6	6
Lead	mg/kg	8	8	14	23	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	5	10	5	6
Zinc	mg/kg	35	23	33	68	33

Acid Extractable metals in soil						
Our Reference		217283-121	217283-122	217283-123	217283-128	217283-133
Your Reference	UNITS	7109/DUP04	7109/DUP05	7109/DUP06	7109/DUP12	7109/SS55
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	11	14	11	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	12	11	12	11
Copper	mg/kg	11	13	12	11	8
Lead	mg/kg	10	12	13	12	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	12	10	9	8
Zinc	mg/kg	50	44	45	39	24

Acid Extractable metals in soil						
Our Reference		217283-134	217283-135	217283-140	217283-141	217283-142
Your Reference	UNITS	7109/SS99	7109/SS119	Composite 1	Composite 2	Composite 3
Composite Reference		-	-	1 + 2 + 3	4 + 5 + 6	7 + 8 + 9
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	11	10	14	15	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	11	13	11	11
Copper	mg/kg	10	7	15	10	14
Lead	mg/kg	11	8	14	11	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	5	13	9	12
Zinc	mg/kg	39	36	55	48	51

Acid Extractable metals in soil						
Our Reference		217283-143	217283-144	217283-145	217283-146	217283-147
Your Reference	UNITS	Composite 4	Composite 5	Composite 6	Composite 7	Composite 8
Composite Reference		10 + 11 + 12	13 + 14 + 15	16 + 17 + 18	19 + 20 + 21	22 + 23 + 24
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	11	7	24	10	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	8	14	11	10
Copper	mg/kg	24	7	18	12	11
Lead	mg/kg	11	9	25	12	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	29	6	16	11	9
Zinc	mg/kg	62	33	61	42	48

Acid Extractable metals in soil						
Our Reference		217283-148	217283-149	217283-150	217283-151	217283-152
Your Reference	UNITS	Composite 9	Composite 10	Composite 11	Composite 12	Composite 13
Composite Reference		25 + 26 + 27	28 + 29 + 30	31 + 32 + 33	34 + 35 + 36	37 + 38 + 39
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	9	8	8	10	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	8	8	10	11
Copper	mg/kg	10	8	8	9	11
Lead	mg/kg	11	9	9	11	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	7	7	7	9
Zinc	mg/kg	44	35	38	35	37

Acid Extractable metals in soil						
Our Reference		217283-153	217283-154	217283-155	217283-156	217283-157
Your Reference	UNITS	Composite 14	Composite 15	Composite 16	Composite 17	Composite 18
Composite Reference		40 + 41 + 42	43 + 44 + 45	46 + 47 + 48	49 + 50 + 51	52 + 53 + 54
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	10	9	10	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	11	10	10	9
Copper	mg/kg	9	11	8	10	11
Lead	mg/kg	11	12	10	11	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	9	6	9	8
Zinc	mg/kg	39	39	37	43	51

Acid Extractable metals in soil						
Our Reference		217283-158	217283-159	217283-160	217283-161	217283-162
Your Reference	UNITS	Composite 19	Composite 20	Composite 21	Composite 22	Composite 23
Composite Reference		55 + 56 + 57	58 + 59 + 60	61 + 62 + 63	64 + 65 + 66	67 + 68 + 69
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	7	5	10	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	9	7	10	9
Copper	mg/kg	9	6	6	7	8
Lead	mg/kg	10	9	7	9	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	5	4	6	5
Zinc	mg/kg	42	32	31	26	28

Acid Extractable metals in soil						
Our Reference		217283-163	217283-164	217283-165	217283-166	217283-167
Your Reference	UNITS	Composite 24	Composite 25	Composite 26	Composite 27	Composite 28
Composite Reference		70 + 71 + 72	73 + 74 + 75	76 + 77 + 78	79 + 80 + 81	82 + 83 + 84
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	8	7	10	10
Cadmium	mg/kg	<0.4	8.7	<0.4	<0.4	<0.4
Chromium	mg/kg	10	9	8	14	11
Copper	mg/kg	8	9	8	9	9
Lead	mg/kg	10	11	10	11	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	5	7	6
Zinc	mg/kg	23	31	27	38	28

Acid Extractable metals in soil						
Our Reference		217283-168	217283-169	217283-170	217283-171	217283-172
Your Reference	UNITS	Composite 29	Composite 30	Composite 31	Composite 32	Composite 33
Composite Reference		85 + 86 + 87	88 + 89 + 90	91 + 92 + 93	94 + 95 + 96	97 + 98 + 99
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	10	11	10	10	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	11	13	11	11
Copper	mg/kg	9	11	5	11	6
Lead	mg/kg	11	12	9	13	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	8	6	8	4
Zinc	mg/kg	31	42	23	38	22

Acid Extractable metals in soil					
Our Reference		217283-173	217283-174	217283-175	217283-176
Your Reference	UNITS	Composite 34	Composite 35	Composite 36	Composite 37
Composite Reference		100 + 101 + 102	103 + 104 + 105	106 + 107 + 108	109 + 110 + 111
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Arsenic	mg/kg	8	9	9	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	13	11	10
Copper	mg/kg	6	11	10	10
Lead	mg/kg	9	13	12	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	8	7	8
Zinc	mg/kg	30	45	33	35

Misc Inorg - Soil				
Our Reference		217283-112	217283-113	217283-116
Your Reference	UNITS	7109/SS04	7109/SS36	7109/SS109
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	15/05/2019	15/05/2019	15/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019
pH 1:5 soil:water	pH Units	6.8	6.8	5.4

Moisture						
Our Reference		217283-9	217283-112	217283-113	217283-114	217283-115
Your Reference	UNITS	7109/SS10	7109/SS04	7109/SS36	7109/SS46	7109/SS73
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	12	10	12	15	13

Moisture						
Our Reference		217283-116	217283-117	217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SS109	7109/DS01	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	9.9	31	6.4	4.7	3.5

Moisture						
Our Reference		217283-121	217283-122	217283-123	217283-128	217283-133
Your Reference	UNITS	7109/DUP04	7109/DUP05	7109/DUP06	7109/DUP12	7109/SS55
Composite Reference		-	-	-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	8.6	10	13	11	11

Moisture						
Our Reference		217283-134	217283-135	217283-140	217283-141	217283-142
Your Reference	UNITS	7109/SS99	7109/SS119	Composite 1	Composite 2	Composite 3
Composite Reference		-	-	1 + 2 + 3	4 + 5 + 6	7 + 8 + 9
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	11	12	9.8	8.8	10

Moisture						
Our Reference		217283-143	217283-144	217283-145	217283-146	217283-147
Your Reference	UNITS	Composite 4	Composite 5	Composite 6	Composite 7	Composite 8
Composite Reference		10 + 11 + 12	13 + 14 + 15	16 + 17 + 18	19 + 20 + 21	22 + 23 + 24
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	8.6	8.7	10	10	8.9

Moisture						
Our Reference		217283-148	217283-149	217283-150	217283-151	217283-152
Your Reference	UNITS	Composite 9	Composite 10	Composite 11	Composite 12	Composite 13
Composite Reference		25 + 26 + 27	28 + 29 + 30	31 + 32 + 33	34 + 35 + 36	37 + 38 + 39
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	8.9	12	9.1	9.4	9.8

Moisture						
Our Reference		217283-153	217283-154	217283-155	217283-156	217283-157
Your Reference	UNITS	Composite 14	Composite 15	Composite 16	Composite 17	Composite 18
Composite Reference		40 + 41 + 42	43 + 44 + 45	46 + 47 + 48	49 + 50 + 51	52 + 53 + 54
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	7.2	8.3	7.9	8.6	9.9

Moisture						
Our Reference		217283-158	217283-159	217283-160	217283-161	217283-162
Your Reference	UNITS	Composite 19	Composite 20	Composite 21	Composite 22	Composite 23
Composite Reference		55 + 56 + 57	58 + 59 + 60	61 + 62 + 63	64 + 65 + 66	67 + 68 + 69
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	8.8	7.8	8.7	9.9	10

Moisture						
Our Reference		217283-163	217283-164	217283-165	217283-166	217283-167
Your Reference	UNITS	Composite 24	Composite 25	Composite 26	Composite 27	Composite 28
Composite Reference		70 + 71 + 72	73 + 74 + 75	76 + 77 + 78	79 + 80 + 81	82 + 83 + 84
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	7.6	11	11	18	11

Moisture						
Our Reference		217283-168	217283-169	217283-170	217283-171	217283-172
Your Reference	UNITS	Composite 29	Composite 30	Composite 31	Composite 32	Composite 33
Composite Reference		85 + 86 + 87	88 + 89 + 90	91 + 92 + 93	94 + 95 + 96	97 + 98 + 99
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	11	13	24	12	10

Moisture					
Our Reference		217283-173	217283-174	217283-175	217283-176
Your Reference	UNITS	Composite 34	Composite 35	Composite 36	Composite 37
Composite Reference		100 + 101 + 102	103 + 104 + 105	106 + 107 + 108	109 + 110 + 111
Date Sampled		09/05/2019	09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	14/05/2019	14/05/2019	14/05/2019	14/05/2019
Date analysed	-	15/05/2019	15/05/2019	15/05/2019	15/05/2019
Moisture	%	8.5	16	14	14

Asbestos ID - soils				
Our Reference		217283-118	217283-119	217283-120
Your Reference	UNITS	7109/SP01	7109/SP02	7109/SP03
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date analysed	-	15/05/2019	15/05/2019	15/05/2019
Sample mass tested	g	Approx. 25g	Approx. 40g	Approx. 40g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

CEC				
Our Reference		217283-112	217283-113	217283-116
Your Reference	UNITS	7109/SS04	7109/SS36	7109/SS109
Composite Reference		-	-	-
Date Sampled		09/05/2019	09/05/2019	09/05/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	16/05/2019	16/05/2019	16/05/2019
Date analysed	-	16/05/2019	16/05/2019	16/05/2019
Exchangeable Ca	meq/100g	7.1	5.8	7.7
Exchangeable K	meq/100g	0.9	1.6	0.7
Exchangeable Mg	meq/100g	1.2	1.3	1.9
Exchangeable Na	meq/100g	<0.1	<0.1	<0.1
Cation Exchange Capacity	meq/100g	9.2	8.8	10

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			17/05/2019	120	17/05/2019	17/05/2019		17/05/2019	17/05/2019
TRH C_6 - C_9	mg/kg	25	Org-016	<25	120	<25	<25	0	107	110
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	120	<25	<25	0	107	110
Benzene	mg/kg	0.2	Org-016	<0.2	120	<0.2	<0.2	0	105	110
Toluene	mg/kg	0.5	Org-016	<0.5	120	<0.5	<0.5	0	105	109
Ethylbenzene	mg/kg	1	Org-016	<1	120	<1	<1	0	107	111
m+p-xylene	mg/kg	2	Org-016	<2	120	<2	<2	0	108	110
o-Xylene	mg/kg	1	Org-016	<1	120	<1	<1	0	109	112
naphthalene	mg/kg	1	Org-014	<1	120	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	110	120	107	104	3	105	105

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			15/05/2019	120	15/05/2019	15/05/2019		15/05/2019	15/05/2019
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	120	<50	<50	0	117	115
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	120	<100	<100	0	119	117
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	120	<100	<100	0	100	92
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	120	<50	<50	0	117	115
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	120	<100	<100	0	119	117
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	120	<100	<100	0	100	92
Surrogate o-Terphenyl	%		Org-003	89	120	90	89	1	105	102

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			15/05/2019	120	15/05/2019	15/05/2019		15/05/2019	15/05/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	112	112
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	100	100
Phenanthrene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	94	92
Anthracene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	90	90
Pyrene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	94	92
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	128	126
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	120	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	120	<0.05	<0.05	0	102	98
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	95	120	96	98	2	94	93

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
HCB	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	89	88
gamma-BHC	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	95	93
Heptachlor	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	95	98
delta-BHC	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	90	88
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	100	96
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	95	91
Dieldrin	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	103	102
Endrin	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	93	96
pp-DDD	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	100	97
Endosulfan II	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	84	97
Methoxychlor	mg/kg	0.1	Org-005	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	101	9	96	96	0	89	89

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	217283-151
Date extracted	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
HCB	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	78	87
gamma-BHC	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	84	93
Heptachlor	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	84	93
delta-BHC	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	82	89
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	91	98
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	85	91
Dieldrin	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	94	105
Endrin	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	86	82
pp-DDD	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	95	97
Endosulfan II	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	79	90
Methoxychlor	mg/kg	0.1	Org-005	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	120	103	105	2	81	94

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	217283-171
Date extracted	-			[NT]	150	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	150	14/05/2019	14/05/2019		14/05/2019	14/05/2019
HCB	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	82	82
gamma-BHC	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	89	85
Heptachlor	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	86	82
delta-BHC	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	89	88
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	96	94
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	92	89
Dieldrin	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	101	102
Endrin	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	88	89
pp-DDD	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	103	91
Endosulfan II	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	74	75
Methoxychlor	mg/kg	0.1	Org-005	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	150	95	74	25	87	90

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	160	94	93	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	170	84	92	9	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	109	121
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	87	97
Dimethoate	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	91	111
Fenitrothion	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	95	109
Malathion	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	85	86
Parathion	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	96	107
Ronnel	mg/kg	0.1	Org-008	<0.1	9	<0.1	<0.1	0	99	113
Surrogate TCMX	%		Org-008	101	9	96	96	0	99	101

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	217283-151
Date extracted	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	121	110
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	101	89
Dimethoate	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	98	93
Fenitrothion	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	101	100
Malathion	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	86	87
Parathion	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	108	101
Ronnel	mg/kg	0.1	Org-008	[NT]	120	<0.1	<0.1	0	112	100
Surrogate TCMX	%		Org-008	[NT]	120	103	105	2	107	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	217283-171
Date extracted	-			[NT]	150	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	150	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	117	109
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	97	75
Dimethoate	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	110	95
Fenitrothion	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	108	101
Malathion	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	86	85
Parathion	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	115	116
Ronnel	mg/kg	0.1	Org-008	[NT]	150	<0.1	<0.1	0	123	98
Surrogate TCMX	%		Org-008	[NT]	150	95	74	25	115	93

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	160	94	93	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	170	84	92	9	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date extracted	-			14/05/2019	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			14/05/2019	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	96	95
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	120	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	101	120	103	105	2	99	101

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	217283-119
Date prepared	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			14/05/2019	9	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Arsenic	mg/kg	4	Metals-020	<4	9	10	10	0	79	102
Cadmium	mg/kg	0.4	Metals-020	<0.4	9	<0.4	<0.4	0	110	94
Chromium	mg/kg	1	Metals-020	<1	9	11	11	0	120	98
Copper	mg/kg	1	Metals-020	<1	9	12	12	0	107	98
Lead	mg/kg	1	Metals-020	<1	9	12	12	0	119	97
Mercury	mg/kg	0.1	Metals-021	<0.1	9	<0.1	<0.1	0	94	93
Nickel	mg/kg	1	Metals-020	<1	9	12	12	0	108	94
Zinc	mg/kg	1	Metals-020	<1	9	43	42	2	112	98

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	217283-151
Date prepared	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	120	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Arsenic	mg/kg	4	Metals-020	[NT]	120	7	7	0	75	102
Cadmium	mg/kg	0.4	Metals-020	[NT]	120	<0.4	<0.4	0	106	98
Chromium	mg/kg	1	Metals-020	[NT]	120	14	15	7	117	99
Copper	mg/kg	1	Metals-020	[NT]	120	6	7	15	102	101
Lead	mg/kg	1	Metals-020	[NT]	120	15	15	0	116	98
Mercury	mg/kg	0.1	Metals-021	[NT]	120	<0.1	<0.1	0	88	83
Nickel	mg/kg	1	Metals-020	[NT]	120	6	6	0	103	98
Zinc	mg/kg	1	Metals-020	[NT]	120	33	26	24	109	106

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	217283-171
Date prepared	-			[NT]	128	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Date analysed	-			[NT]	128	14/05/2019	14/05/2019		14/05/2019	14/05/2019
Arsenic	mg/kg	4	Metals-020	[NT]	128	11	11	0	94	106
Cadmium	mg/kg	0.4	Metals-020	[NT]	128	<0.4	<0.4	0	104	97
Chromium	mg/kg	1	Metals-020	[NT]	128	12	12	0	109	102
Copper	mg/kg	1	Metals-020	[NT]	128	11	10	10	100	102
Lead	mg/kg	1	Metals-020	[NT]	128	12	12	0	109	101
Mercury	mg/kg	0.1	Metals-021	[NT]	128	<0.1	<0.1	0	89	85
Nickel	mg/kg	1	Metals-020	[NT]	128	9	8	12	102	98
Zinc	mg/kg	1	Metals-020	[NT]	128	39	37	5	105	97

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	150	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	150	14/05/2019	14/05/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	150	8	10	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	150	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	150	8	9	12	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	150	8	7	13	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	150	9	10	11	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	150	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	150	7	7	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	150	38	38	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	160	14/05/2019	14/05/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	160	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	160	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	160	7	6	15	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	160	6	6	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	160	7	7	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	160	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	160	4	4	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	160	31	33	6	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
Date analysed	-			[NT]	170	14/05/2019	14/05/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	170	10	15	40	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	170	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	170	13	14	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	170	5	7	33	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	170	9	11	20	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	170	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	170	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	170	23	24	4	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			15/05/2019	[NT]	[NT]	[NT]	[NT]	15/05/2019	[NT]
Date analysed	-			15/05/2019	[NT]	[NT]	[NT]	[NT]	15/05/2019	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			16/05/2019	113	16/05/2019	16/05/2019		16/05/2019	[NT]
Date analysed	-			16/05/2019	113	16/05/2019	16/05/2019		16/05/2019	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	113	5.8	5.9	2	103	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	113	1.6	1.6	0	101	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	113	1.3	1.3	0	99	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	113	<0.1	<0.1	0	97	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Report Comments

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples 217283-118 to 120 were sub-sampled from jars provided by the client.

Martens & Associates Pty Ltd
Suite 201, 20 George St
Hornsby
NSW 2077

Attention: **Matt Vaughan**

Report **655360-S**
Project name ST MATTHEW CATHOLIC SCHOOL MUDGEE
Project ID P1907109
Received Date May 13, 2019

Client Sample ID			**7109/TRIP01**	**7109/TRIP04**
Sample Matrix			**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-My20074**	**S19-My20075**
Date Sampled			**May 09, 2019**	**May 09, 2019**
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	11	12
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	12	14
Copper	5	mg/kg	13	12
Lead	5	mg/kg	13	15
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	12	10
Zinc	5	mg/kg	57	46
% Moisture	1	%	9.7	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	May 17, 2019	28 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	May 14, 2019	14 Day
- Method: LTM-GEN-7080 Moisture			

eurofins | mgt

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NATA # 1261
Site # 23736

Company Name:	Martens & Associates Pty Ltd	**Order No.:**		**Received:**	May 13, 2019 3:30 PM
Address:	Suite 201, 20 George St Hornsby NSW 2077	**Report #:**	655360	**Due:**	May 20, 2019
		Phone:	02 9476 9999	**Priority:**	5 Day
		Fax:	02 9476 8767	**Contact Name:**	Matt Vaughan
Project Name:	ST MATTHEW CATHOLIC SCHOOL MUDGEE				
Project ID:	P1907109				

Eurofins | mgt Analytical Services Manager : Ursula Long

Sample Detail						Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	7109/TRIP01	May 09, 2019		Soil	S19-My20074	X	X
2	7109/TRIP04	May 09, 2019		Soil	S19-My20075	X	X
Test Counts						2	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 where no positive PFAS results have been reported have been reviewed and no data was affected.

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			70-130	Pass	
Cadmium	%	100			70-130	Pass	
Chromium	%	103			70-130	Pass	
Copper	%	104			70-130	Pass	
Lead	%	101			70-130	Pass	
Mercury	%	90			70-130	Pass	
Nickel	%	104			70-130	Pass	
Zinc	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-My23760	NCP	%	99			70-130	Pass	
Cadmium	S19-My23760	NCP	%	99			70-130	Pass	
Chromium	S19-My23760	NCP	%	89			70-130	Pass	
Copper	S19-My23760	NCP	%	102			70-130	Pass	
Lead	S19-My23760	NCP	%	129			70-130	Pass	
Mercury	S19-My23760	NCP	%	99			70-130	Pass	
Nickel	S19-My23760	NCP	%	92			70-130	Pass	
Zinc	S19-My23760	NCP	%	103			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-My23759	NCP	mg/kg	14	15	4.0	30%	Pass	
Cadmium	S19-My23759	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-My23759	NCP	mg/kg	130	110	16	30%	Pass	
Copper	S19-My23759	NCP	mg/kg	28	28	<1	30%	Pass	
Lead	S19-My23759	NCP	mg/kg	60	52	15	30%	Pass	
Mercury	S19-My23759	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-My23759	NCP	mg/kg	20	20	<1	30%	Pass	
Zinc	S19-My23759	NCP	mg/kg	49	54	9.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-My19858	NCP	%	8.5	7.9	8.0	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Ursula Long	Analytical Services Manager
Gabriele Cordero	Senior Analyst-Metal (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please click here.

William Xu

From: Jeremy Faircloth <JFaircloth@envirolab.com.au>
Sent: Tuesday, 11 June 2019 2:27 PM
To: Jeffrey Fulton
Cc: William Xu; Brett McLennan
Subject: FW: Results for Registration 217283-A P1907109, St Matthew Catholic School, Mudgee

Good afternoon gents,
Please see repeat results in triplicate as below. It looks as if it was a hotspot in the original composite.

Regards,

Jeremy Faircloth | Operations Manager | Envirolab Services Pty Ltd

Great Science, Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200 **F** 612 9910 6201
E jfaircloth@envirolab.com.au | **W** www.envirolab.com.au

From: Loren Bardwell <LBardwell@envirolab.com.au>
Sent: Tuesday, 11 June 2019 2:00 PM
To: Jeremy Faircloth <JFaircloth@envirolab.com.au>; metalcalc@envirolab.com.au; Steven Luong <SLuong@envirolab.com.au>
Cc: Nancy Zhang <NZhang@envirolab.com.au>
Subject: RE: Results for Registration 217283-A P1907109, St Matthew Catholic School, Mudgee

Repeat metals results. Cd all <PQL

Sample	As (mg/Kg)	Cd (mg/Kg)	Cr (mg/Kg)	Cu (mg/Kg)	Ni (mg/Kg)	Pb (mg/Kg)	Zn (mg/Kg)	Hg (mg/Kg)
S217283-73	8.693	<0.4	10.512	8.906	6.729	10.923	27.089	0.1
S217283-73D	8.987	<0.4	10.456	9.643	7.058	11.008	29.021	<0.1
S217283-73T	8.493	<0.4	10.122	9.449	6.797	10.459	28.886	<0.1
S217283-74	9.382	<0.4	11.533	10.326	6.92	12.166	33.069	<0.1

S217283-74D	9.227	<0.4	11.324	10.153	6.782	12.186	31.437	<0.1
S217283-74T	9.303	<0.4	10.992	9.933	6.627	12.008	31.959	<0.1
S217283-75	<4	<0.4	5.699	6.189	4.142	7.084	21.448	<0.1
S217283-75D	<4	<0.4	5.362	5.521	3.787	6.805	18.682	<0.1
S217283-75T	<4	<0.4	5.406	5.982	3.949	6.922	19.874	<0.1
S217283-164	7.31	<0.4	9.377	8.762	6.067	10.362	27.799	<0.1
S217283-164D	6.92	<0.4	8.62	8.4	5.82	9.965	26.629	<0.1
S217283-164T	7.412	<0.4	9.346	8.418	5.961	10.327	26.679	<0.1

Regards,

Loren Bardwell | Senior Chemist | Envirolab Services Pty Ltd

Great Science, Great Service.