



PO Box 457
Turramurra NSW 2074

ABN: 69 041 751 671

PH: 0437 251 358
Email: philclifton@pclifton.com

6 October 2022

Mr John Sabbouh
Richard Crookes Constructions
Level 3, 4 Broadcast Way
Artarmon NSW 2064

**RE: SOIL SAMPLING IN CHAPEL AREA FOR PESTICIDE ANALYSIS AT
ST JOHN OF GOD RICHMOND HOSPITAL, 177 GROSE VALE ROAD, NORTH RICHMOND NSW**

Dear Sir,

We refer to our recent waste classification soil sampling undertaken for fill soil containing asbestos cement sheet debris that was present in the areas where the former chapel, education centre and monastery buildings were located within the Richard Crookes Constructions site area at the St John of God Richmond Hospital at 177 Grose Vale Road, North Richmond NSW (the site).

The soil sample taken from the stockpiled soil that had been scrapped from across area on which the former chapel building was located was found to contain organochlorine pesticides (comprising mostly dieldrin and aldrin) at a concentration of 63.1 mg/kg. This concentration of pesticides classifies this soil as hazardous waste for purpose of off-site disposal.

The level of aldrin and dieldrin pesticide in this waste classification sample is above the maximum level for all land use types listed in Table 1A (1) Health investigation levels for soil contaminants detailed in Schedule B1 of the 2011 National Environment Protection Measure (NEPM) document.

Following receipt of the waste classification soil analysis results, a further eight soil samples were taken on 30 September 2022 from the area on which the chapel was located and from the surrounding area outside of the building footprint. See attached site plan for the soil sample locations. These samples were collected from soil to an approximate depth of 50mm for laboratory analysis to ascertain the levels of pesticides (organochlorine pesticides and organophosphorus pesticides) remaining in these in-situ soils. The results of the analysis of these samples are summarised in the attached table.

The levels of aldrin and dieldrin in two of these samples collected from the in-situ soils were greater than 50 mg/kg which would classify these soils as hazardous waste for off-site disposal. Five of the soil samples have concentration of aldrin and dieldrin above the level for residential B land use as per the NEPM 2011 (residential B land use is the closest land use scenario listed for this site in Table 1A of the NEPM 2011).

No organophosphorus pesticide contamination was identified in any of the eight soil samples collected on 30 September 2022.



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Table 1A lists the maximum levels of various soil contaminants for four typical land use scenarios. These land use scenarios are as follows:

Residential A – HIL A Standard residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake,(no poultry), includes children’s day care centres, preschools and primary schools.

Residential B – HIL B Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats.

Recreational C - HIL C Includes developed open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space which should be subject to a site-specific assessment, where appropriate.

Commercial / Industrial - HIL D Commercial/industrial includes premises such as shops, offices, factories and industrial sites.

The maximum levels for aldrin and dieldrin pesticides specified for these land use scenarios are Residential A – 7 mg/kg, Residential B – 10 mg/kg, Recreational – 9 mg/kg and Commercial / Industrial – 50 mg/kg.

Recommendations

Based on the results of the eight soil samples collected on 30 September 2022, we recommend that further soil sampling be carried out in and around the area on which the former chapel building was located to ascertain the vertical extent of pesticide contamination in the in-situ fill soils. Following determination of the lateral and vertical extent of pesticide contamination in this area of the site, the soil containing levels of aldrin and dieldrin above 10 mg/kg can be excavated and stockpiled for waste classification analysis to allow for this soil to be removed from the site for disposal at a licenced landfill facility.



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If you require any further information, please contact the undersigned on 0437 251 358.

Yours faithfully

P. CLIFTON & ASSOCIATES PTY LTD

Philip Clifton
Principal
BOHS IP402 Certified
SafeWork NSW Licenced Asbestos Assessor

Attachments:

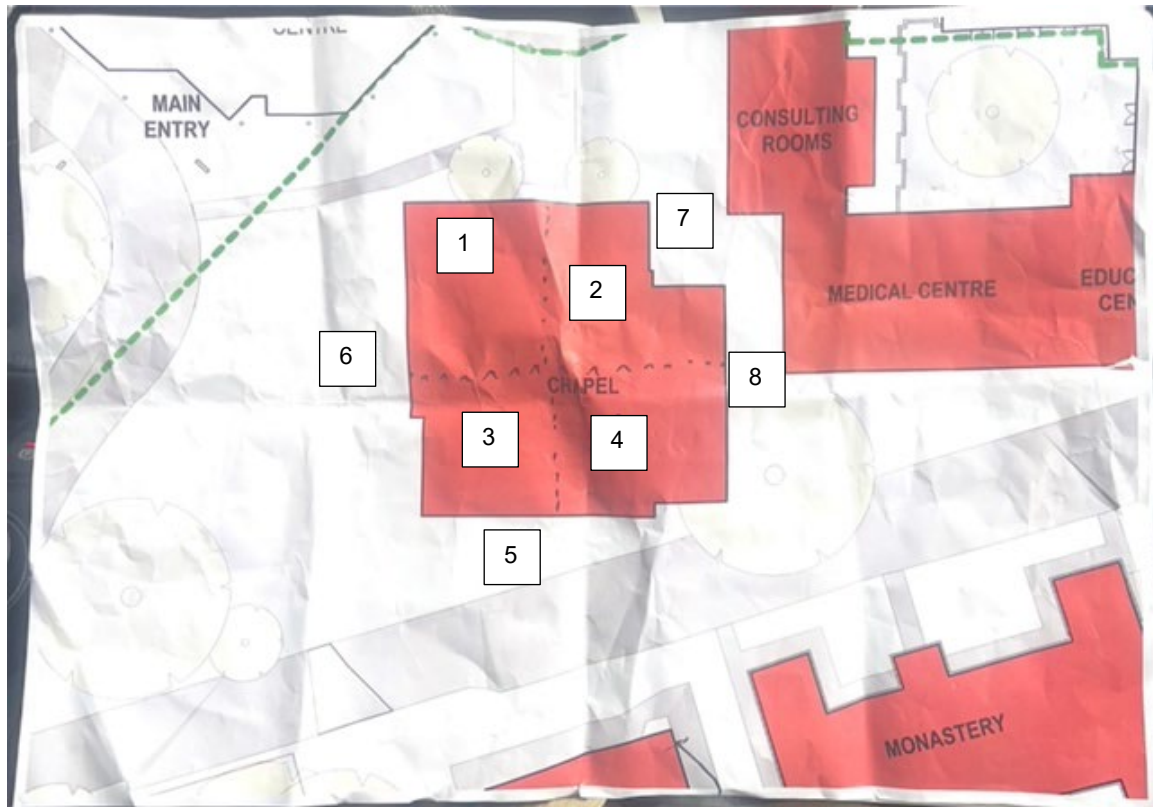
- 1 – Site Plan Showing Soil Sample Locations
- 2 - Summary Table of Analytical Results
- 3 – Laboratory Report and Chain of Custody Documentation



APPENDIX 1

SOIL SAMPLE LOCATIONS

6 October 2022



**Soil sample locations collected on 30 September 2022
from the Chapel building area and surrounding areas**



APPENDIX 2

SUMMARY TABLE OF ANALYTICAL RESULTS



Table 1 – Summary of Analytical Results 6 October 2022

Richard Crookes Constructions – Chapel Area at St John of God Richmond Hospital, North Richmond NSW

Sampled Friday 30 September 2022

Analyte	Sample 1	Sample 2	Sample 3	Sample 4	NSW EPA Waste Classification			NSW EPA Waste Classification	NEPM 2013 HIL B
	Chapel NW 307014-1	Chapel NE 307014-2	Chapel SW 307014-3	Chapel SE 307014-4	General Solid Waste Threshold Levels				
	Total concentration (mg/kg)	Total Concentration (mg/kg)	Total concentration (mg/kg)	Total concentration (mg/kg)	CT1 / CT2 concentration (mg/kg)	SCC1 / SCC2 concentration (mg/kg)	TCLP1 / TCLP2 concentration (mg/L)		
Sample depth	0.05m BGL	0.05m BGL	0.05m BGL	0.05m BGL	-	-	-	-	
OCP (Pesticides)	7.9	13.9	11.3	65	<50	<50	N/A	Hazardous Waste	10
OPP (Pesticides)	<0.1	<0.1	<0.1	<0.1	<50	<50	N/A	General solid waste	400
Analyte	Sample 5	Sample 6	Sample 7	Sample 8	NSW EPA Waste Classification			NSW EPA Waste Classification	NEPM 2013 HIL B
	South of Chapel 307014-5	West of Chapel 307014-6	East of Chapel 307014-7	North east of Chapel 307014-8	General Solid Waste Threshold Levels				
	Total concentration (mg/kg)	Total Concentration (mg/kg)	Total concentration (mg/kg)	Total concentration (mg/kg)	CT1 / CT2 concentration (mg/kg)	SCC1 / SCC2 concentration (mg/kg)	TCLP1 / TCLP2 concentration (mg/L)		
Sample depth	0.05m BGL	0.05m BGL	0.05m BGL	0.05m BGL	-	-	-	-	
OCP (Pesticides)	0.2	23	<0.1	62.1	<50	<50	N/A	Hazardous Waste	10
OPP (Pesticides)	<0.1	<0.1	<0.1	<0.1	<50	<50	N/A	General solid waste	400



APPENDIX 3

LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENTATION



CERTIFICATE OF ANALYSIS 307014

Client Details

Client	P Clifton & Assoc
Attention	Phil Clifton
Address	PO Box 447, Pymble Business Ctre, NSW, 2073

Sample Details

Your Reference	<u>North Richmond</u>
Number of Samples	8 Soil
Date samples received	30/09/2022
Date completed instructions received	30/09/2022

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	04/10/2022
Date of Issue	04/10/2022

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

Results Approved By

Josh Williams, Organics and LC Supervisor
Liam Timmins, Organic Instruments Team Leader

Authorised By

Nancy Zhang, Laboratory Manager

Client Reference: North Richmond

Organochlorine Pesticides in soil						
Our Reference		307014-1	307014-2	307014-3	307014-4	307014-5
Your Reference	UNITS	1	2	3	4	5
Depth		50	50	50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	04/10/2022	04/10/2022	04/10/2022	04/10/2022	04/10/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	4.5	10	2.3	52	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	3.4	3.9	9.0	13	0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	75	80	80	82	81

Client Reference: North Richmond

Organochlorine Pesticides in soil					
Our Reference		307014-6	307014-7	307014-8	307014-9
Your Reference	UNITS	6	7	8	1 - [TRIPLICATE]
Depth		50	50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	04/10/2022	04/10/2022	04/10/2022	04/10/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	19	<0.1	44	3.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	0.1	<0.1
Dieldrin	mg/kg	4.0	<0.1	18	4.8
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	0.1	<0.1
Surrogate TCMX	%	81	81	81	81

Client Reference: North Richmond

Organophosphorus Pesticides in Soil						
Our Reference		307014-1	307014-2	307014-3	307014-4	307014-5
Your Reference	UNITS	1	2	3	4	5
Depth		50	50	50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	04/10/2022	04/10/2022	04/10/2022	04/10/2022	04/10/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	75	80	80	82	81

Client Reference: North Richmond

Organophosphorus Pesticides in Soil					
Our Reference		307014-6	307014-7	307014-8	307014-9
Your Reference	UNITS	6	7	8	1 - [TRIPLICATE]
Depth		50	50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	04/10/2022	04/10/2022	04/10/2022	04/10/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	81	81	81	81

Client Reference: North Richmond

Moisture						
Our Reference		307014-1	307014-2	307014-3	307014-4	307014-5
Your Reference	UNITS	1	2	3	4	5
Depth		50	50	50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	03/10/2022	03/10/2022	03/10/2022	03/10/2022	03/10/2022
Moisture	%	15	14	15	22	16

Moisture				
Our Reference		307014-6	307014-7	307014-8
Your Reference	UNITS	6	7	8
Depth		50	50	50
Date Sampled		30/09/2022	30/09/2022	30/09/2022
Type of sample		Soil	Soil	Soil
Date prepared	-	30/09/2022	30/09/2022	30/09/2022
Date analysed	-	03/10/2022	03/10/2022	03/10/2022
Moisture	%	14	22	9.7

Client Reference: North Richmond

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Client Reference: North Richmond

QUALITY CONTROL: Organochlorine Pesticides in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	307014-2
Date extracted	-			30/09/2022	1	30/09/2022	30/09/2022		30/09/2022	30/09/2022
Date analysed	-			04/10/2022	1	04/10/2022	04/10/2022		04/10/2022	04/10/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	102
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	103
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	105
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	4.5	5.4	18	93	116
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	101
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	3.4	3.7	8	122	91
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	107
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	96
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	83	1	75	82	9	96	86

Client Reference: North Richmond

QUALITY CONTROL: Organophosphorus Pesticides in Soil				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	307014-2
Date extracted	-			30/09/2022	1	30/09/2022	30/09/2022		30/09/2022	30/09/2022
Date analysed	-			04/10/2022	1	04/10/2022	04/10/2022		04/10/2022	04/10/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	115	109
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	85
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	87
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	93
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	98
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	86
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	80
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	83	1	75	82	9	96	86

Result Definitions

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

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

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

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

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

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

OC's in Soil - The laboratory RPD acceptance criteria has been exceeded for 307014-1. Therefore a triplicate result has been issued as laboratory sample number 307014-9.

OP's in Soil - The laboratory RPD acceptance criteria has been exceeded for 307014-1. Therefore a triplicate result has been issued as laboratory sample number 307014-9.



CHAIN OF CUSTODY FORM - Client

ENVIROLAB GROUP

National phone number 1300 424 344

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

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

Melbourne Lab - Envirolab Services
 25 Research Drive, Croydon South, VIC 3136
 ☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
 7a The Parade, Norwood, SA 5067
 ☎ 08 7087 6800 | ✉ adelaide@envirolab.com.au

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

Darwin Office - Envirolab Services
 Unit 20/119 Reichardt Road, Winnelle, NT 0820
 ☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

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Company: <u>Phil Clifton & ASSOC</u>		Client Project Name/Number/Site etc (ie report title): <u>North Richmond</u>	
Contact Person:		PO No. (if applicable):	
Project Mgr:		Envirolab Quote No. :	
Sampler:		Date results required:	
Address:		Or choose: <input type="checkbox"/> Standard <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day	
Phone:	Mob:	Note: Inform lab in advance if urgent turnaround is required - surcharges apply	
Email Results to: <u>Phil.Clifton@PClifton.com</u>		Additional report format: <input type="checkbox"/> Esdat <input type="checkbox"/> Equis	
Email Invoice to:		Lab Comments:	

Sample information					Tests Required										Comments								
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample	OCPP	OPP																	Provide as much information about the sample as you can
1	1	50mm	30.9.22	Soil	✓	✓																	
2	2	"	"	"	✓	✓																	
3	3	"	"	"	✓	✓																	
4	4	"	"	"	✓	✓																	
5	5	"	"	"	✓	✓																	
6	6	"	"	"	✓	✓																	
7	7	"	"	"	✓	✓																	
8	8	"	"	"	✓	✓																	
		"	"	"																			

Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company): <u>Phil Clifton & ASS</u>		Received by (Company): <u>EL S 5-10</u>		Lab Use Only	
Print Name: <u>Edvin Babela</u>		Print Name: <u>Christhe</u>		Job number: <u>307014</u>	Cooling: Ice <input checked="" type="checkbox"/> Ice pack <input type="checkbox"/> None
Date & Time: <u>30.9.22 11.00am</u>		Date & Time: <u>30/09/22 1000 1030</u>		Temperature: <u>17°C</u>	Security seal: Intact / Broken / None
Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		TAT Req - SAME day <input checked="" type="checkbox"/> 1 / 2 / 3 / 4 / STD	

SAMPLE RECEIPT ADVICE

Client Details

Client	P Clifton & Assoc
Attention	Phil Clifton

Sample Login Details

Your reference	North Richmond
Envirolab Reference	307014
Date Sample Received	30/09/2022
Date Instructions Received	30/09/2022
Date Results Expected to be Reported	04/10/2022

Sample Condition

Samples received in appropriate condition for analysis	
No. of Samples Provided	8 Soil
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	14
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil
	1-50	✓
2-50	✓	✓
3-50	✓	✓
4-50	✓	✓
5-50	✓	✓
6-50	✓	✓
7-50	✓	✓
8-50	✓	✓

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

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.