



PO Box 457  
Turramurra NSW 2074

ABN: 69 041 751 671

PH: 0437 251 358  
Email: [philclifton@pclifton.com](mailto:philclifton@pclifton.com)

20 November 2022

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

**RE: WASTE CLASSIFICATION OF STOCKPILED FILL SOIL CONTAINING ASBESTOS  
CEMENT SHEET DEBRIS IN THE MEDICAL CENTRE DEMOLITION AREA AT ST JOHN OF  
GOD RICHMOND HOSPITAL, 177 GROSE VALE ROAD, NORTH RICHMOND NSW**

Dear Sir,

**INTRODUCTION**

This letter report presents the findings of a waste classification assessment conducted on fill soils that have been excavated and stockpiled in the area on which the demolished part of the former medical centre building was located within the St John of God Richmond Hospital at 177 Grose Vale Road, North Richmond NSW (the site). Following demolition of the southern part of the medical centre building fill soil below the concrete slab floors of this part of the building was found to contain random fragments of asbestos cement sheet debris.

The fill soil containing asbestos cement sheet debris in this area at the site has been stockpiled to allow for waste classification sampling and reporting to be completed. The soil in this area at the site cannot be retained on site and is to be excavated for off-site disposal at a landfill facility licenced to accept the soil. Soil sampling from the stockpile to allow for the soil to be classified for off-site disposal was undertaken on Thursday 17 November 2022.

**SITE IDENTIFICATION DETAILS**

Site address: 177 Grose Vale Road, North Richmond NSW

Legal Identification: Lot 12 DP1134453 and Lot 11 DP11134453

LGA: Hawkesbury City Council

Zoning: RU1 Primary Production, W1 Natural Waterways

**SITE OBSERVATIONS AND SOIL SAMPLING**

Fieldwork was undertaken on Thursday 17 November 2022 and comprised an inspection of the stockpiled fill soil located adjacent to the remainder of the Medical Centre Building which has been retained. The soil in the stockpile comprises sandy and silty clay soil in which there are pieces of brick and concrete debris from the recently completed demolition work.

Within the stockpiled soil there are a number of fragments of asbestos cement sheet debris. See attached photograph Nos. 4 and 5.

During the site inspection four soil samples were collected from the stockpiled fill soil for laboratory analysis to ascertain the levels of potential chemical contaminants to enable this waste classification report to be prepared to allow for the fill soil to be disposed of to a suitably licenced landfill site.

The stockpiled fill soil in the medical centre building demolition area has no noticeable odour or discoloration from oil or chemical contamination.

Four soil sample were collected during the site inspection on 17 November 2022 for laboratory analysis to determine the waste classification of the stockpiled fill soil containing asbestos cement sheet debris that is to be loaded out from the site for off-site disposal at a NSW EPA licenced landfill site.

## **ANALYTICAL REGIME**

The soil samples collected on 17 November 2022 were placed into clean laboratory supplied sample jars fitted with Teflon lined lids that were each marked with the date, sample number and project number. The sample jars were filled with soil with no airspace remaining.

The sampled soil was collected using disposable surgical-type gloves. No tools requiring cleaning prior to or following sample collection were used for the sample collection.

Following collection, the samples were placed into a chilled esky and were delivered to Envirolab Services NATA accredited laboratory at Chatswood NSW on 17 November 2022 for waste classification analysis for the following suite of common contaminants including:

- 8 priority heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);
- Polycyclic Aromatic Hydrocarbons (PAH);
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethyl benzene and Xylene: BTEX);
- Organochlorine pesticides (OCP),
- Polychlorinated Biphenyls (PCB) and
- Asbestos.

## ASSESSMENT CRITERIA

With regard to the stockpiled fill soil at the site which is to be excavated for disposal at a licenced landfill facility, waste classification assessment was conducted with reference to the NSW Environment Protection Authority (NSW EPA) Waste Classification Guidelines (November 2014). According to these guidelines, waste material is to be assessed by the following six step process, viz.

### Steps Description

1. Is the waste Special Waste? – Yes, the soil contains asbestos cement sheet debris.
2. Is the waste Liquid Waste? - No, the sampled material comprises mostly sand fill soil with some building debris inclusions.
3. Has the waste been pre-classified? - No, the soil is not pre-classified as per the NSW EPA 2014 waste guideline.
4. Is the waste Hazardous Waste? – No, the waste soil does not comprise hazardous waste.
5. Chemical Assessment in accordance with the specified total and or leachable contaminant concentration thresholds? – Yes, see attached summary table of laboratory results.
6. Is the waste putrescible? – No putrescible waste was sighted on or in the sandy clay fill soil located in the medical centre demolition area at the site that is to be excavated for off-site disposal and which is the subject of this waste classification report.

In particular, with regard to Step 6, wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

## SUMMARY OF RESULTS AND WASTE CLASSIFICATION

The analytical results for the soil samples are presented in the attached table (Table 1). The NATA endorsed laboratory reports are attached to this letter report.

**The contaminant levels within the stockpiled fill soil in the medical centre demolition area within the St John of God Richmond Hospital site at 177 Grose Vale Road, North Richmond NSW were found to be below the maximum guideline levels for classification as general solid waste (non-putrescible) based on the contaminant threshold (CT1) with the exception of lead in sample 1.**



Page 4 of 5  
20 November 2022

**The level of lead in sample 1 is above the CT1 maximum concentration for general solid waste classification without leachate analysis.**

**Leachate analysis of sample 1 was carried out and based on the specific contaminant concentration (SCC) and the leachate (TCLP) results, the level of lead in sample 1 is classifiable as general solid waste (GSW) (non-putrescible) (SCC1 and TCLP1).**

**The soil in the stockpile contains asbestos cement sheet debris. Therefore the soil in the stockpile must only be disposed of at a landfill facility licenced by the NSW EPA to accept soils classified as general solid waste – special waste asbestos.**

It is recommended that the receiving NSW EPA landfill site(s) should check the incoming materials and ensure that the waste received matches the material description provided in this letter report.

**Important Note:**

PCA's assessment is necessarily based on the result of limited site investigation and sample testing. Neither PCA, nor any other reputable consultant, can provide unqualified warranties nor does PCA assume any liability for site conditions not observed, or accessible during the time of the investigations.

Despite all reasonable care and diligence, the materials encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated.

In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions and other events, e.g. groundwater movement and or spillages of contaminating substances. These changes may occur subsequent to PCA's investigations and assessment.

This report and associated documentation and the information herein have been prepared solely for the use of Richard Crookes Constructions, their excavation and transport contractors as well as interested parties at the time and is valid (for the purposes of transport of material) for a period of one month only from the date of issue.

Any other reliance assumed by third parties on this report shall be at such parties' own risk. Any ensuing liability resulting from use of the report by third parties cannot be transferred to PCA.



Page 5 of 5  
20 November 2022

Please note that Part 5.6, Section 143 of the Protection of the Environment Operations (POEO) Act 1997 states that it is an offence for waste to be transported to a place that cannot lawfully be used as a facility to accept that waste. It is the duty of the owner and transporter of the waste to ensure that the waste is disposed of appropriately. PCA accepts no liability for the unlawful disposal of waste materials from any site. PCA accepts no responsibility for the material tracking, loading, management, transport or disposal of waste from the site. Before disposal of the material to a licensed landfill is undertaken, the waste producer is required to obtain consent from the landfill.

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

Yours faithfully

**P. CLIFTON & ASSOCIATES PTY LTD**

Philip Clifton  
Principal

Attachments:

- Photograph
- Laboratory Report and Chain of Custody Documentation
- Summary Table of Analytical Results



**PHOTOGRAPH**

20 November 2022



**Excavated soil containing asbestos cement sheet debris from the medical centre demolition area that was stockpiled on 26 October 2022 and sampled for waste classification analysis on 17 November 2022**



**LABORATORY REPORT AND CHAIN OF CUSTODY DOCUMENTATION**





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 310898**

### **Client Details**

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

### **Sample Details**

<b>Your Reference</b>	<b><u>North Richmond</u></b>
<b>Number of Samples</b>	4 Soil
<b>Date samples received</b>	17/11/2022
<b>Date completed instructions received</b>	17/11/2022

### **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** 18/11/2022

**Date of Issue** 18/11/2022

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

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

#### **Asbestos Approved By**

Analysed by Asbestos Approved Analyst: Lucy Zhu

Authorised by Asbestos Approved Signatory: Lucy Zhu

#### **Results Approved By**

Giovanni Agosti, Group Technical Manager

Josh Williams, Organics and LC Supervisor

Kyle Gavrily, Senior Chemist

Loren Bardwell, Development Chemist

Lucy Zhu, Asbestos Supervisor

#### **Authorised By**

Nancy Zhang, Laboratory Manager

Client Reference: North Richmond

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		310898-1
Your Reference	UNITS	1
Depth		SP
Date Sampled		17/11/2022
Type of sample		Soil
Date extracted	-	18/11/2022
Date analysed	-	18/11/2022
Lead	mg/L	0.1

Client Reference: North Richmond

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	18/11/2022	18/11/2022	18/11/2022	18/11/2022
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	106	104	108	107

Client Reference: North Richmond

svTRH (C10-C40) in Soil					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100	<100	<100	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50	<50	<50	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100	<100	<100	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	76	72	76	73

Client Reference: North Richmond

PAHs in Soil					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	86	87	88	87

Client Reference: North Richmond

Organochlorine Pesticides in soil					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
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	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	78	80	78

Client Reference: North Richmond

PCBs in Soil					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	78	80	78

**Client Reference: North Richmond**

<b>Acid Extractable metals in soil</b>					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	18/11/2022	18/11/2022	18/11/2022	18/11/2022
Date analysed	-	18/11/2022	18/11/2022	18/11/2022	18/11/2022
Arsenic	mg/kg	7	7	5	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	10	9	10
Copper	mg/kg	32	32	27	20
Lead	mg/kg	190	81	54	42
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	35	20	17	12
Zinc	mg/kg	140	86	71	68



**Client Reference: North Richmond**

<b>Moisture</b>					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Date analysed	-	18/11/2022	18/11/2022	18/11/2022	18/11/2022
Moisture	%	7.3	11	9.0	11

Client Reference: North Richmond

TCLP Preparation - Acid					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.1	8.3	8.4	8.4
pH of soil TCLP (after HCl)	pH units	1.4	1.4	1.7	1.6
Extraction fluid used		1	1	1	1
pH of final Leachate	pH units	5.0	5.0	5.0	5.0

Client Reference: North Richmond

Asbestos ID - soils					
Our Reference		310898-1	310898-2	310898-3	310898-4
Your Reference	UNITS	1	2	3	4
Depth		SP	SP	SP	SP
Date Sampled		17/11/2022	17/11/2022	17/11/2022	17/11/2022
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	18/11/2022	18/11/2022	18/11/2022	18/11/2022
Sample mass tested	g	Approx. 40g	Approx. 40g	Approx. 35g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

**Client Reference: North Richmond**

Method ID	Methodology Summary
<b>ASB-001</b>	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.
<b>Inorg-004</b>	<p>Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311.</p> <p>Please note that the mass used may be scaled down from default based on sample mass available.</p> <p>Samples are stored at 2-6oC before and after leachate preparation.</p>
<b>Inorg-008</b>	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
<b>Metals-020</b>	Determination of various metals by ICP-AES.
<b>Metals-020</b>	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
<b>Metals-021</b>	Determination of Mercury by Cold Vapour AAS.
<b>Org-020</b>	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.
<b>Org-020</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (&gt;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.</p> <p>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 (&gt;C10-C40).</p>
<b>Org-021</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
<b>Org-021</b>	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.</p> <p>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.</p>
<b>Org-022/025</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

**Client Reference: North Richmond**

Method ID	Methodology Summary
<b>Org-022/025</b>	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS.</p> <p>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.</p>
<b>Org-022/025</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> <li>1. 'EQ PQL' values are assuming all contributing PAHs reported as &lt;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.</li> <li>2. 'EQ zero' values are assuming all contributing PAHs reported as &lt;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.</li> <li>3. 'EQ half PQL' values are assuming all contributing PAHs reported as &lt;PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above.</li> </ol> <p>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.</p>
<b>Org-023</b>	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.</p>
<b>Org-023</b>	<p>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.</p>
<b>Org-023</b>	<p>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.</p> <p>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.</p>

**Client Reference: North Richmond**

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	
Date extracted	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
Date analysed	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	88	[NT]

Client Reference: North Richmond

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date extracted	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Date analysed	-			18/11/2022	1	18/11/2022	18/11/2022		18/11/2022	18/11/2022
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-023	<25	1	<25	<25	0	104	100
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-023	<25	1	<25	<25	0	104	100
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	129	122
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	108	104
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	91	89
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	95	93
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	103	101
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	1	106	93	13	112	110

Client Reference: North Richmond

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date extracted	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Date analysed	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-020	<50	1	<50	<50	0	113	105
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-020	<100	1	<100	<100	0	100	96
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-020	<100	1	<100	<100	0	90	75
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-020	<50	1	<50	<50	0	113	105
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-020	<100	1	<100	<100	0	100	96
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-020	<100	1	<100	<100	0	90	75
Surrogate o-Terphenyl	%		Org-020	74	1	76	74	3	81	78



Client Reference: North Richmond

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date extracted	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Date analysed	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	82
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	81	81
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	80
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	81
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	85
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	88
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	71	67
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	0.08	46	66	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	83	1	86	85	1	79	83

Client Reference: North Richmond

QUALITY CONTROL: Organochlorine Pesticides in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date extracted	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Date analysed	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	78
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	86	84
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	87	91
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	<0.1	<0.1	0	79	85
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	84
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	86	98
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	94
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	94
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	76	90
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	70	82
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	81	1	80	78	3	78	77

**Client Reference: North Richmond**

QUALITY CONTROL: PCBs in Soil				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date extracted	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Date analysed	-			17/11/2022	1	17/11/2022	17/11/2022		17/11/2022	17/11/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	84	80
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	81	1	80	78	3	78	77

**Client Reference: North Richmond**

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-14	310898-2
Date prepared	-			18/11/2022	1	18/11/2022	18/11/2022		18/11/2022	18/11/2022
Date analysed	-			18/11/2022	1	18/11/2022	18/11/2022		18/11/2022	18/11/2022
Arsenic	mg/kg	4	Metals-020	<4	1	7	5	33	103	94
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	77
Chromium	mg/kg	1	Metals-020	<1	1	9	7	25	101	91
Copper	mg/kg	1	Metals-020	<1	1	32	22	37	104	114
Lead	mg/kg	1	Metals-020	<1	1	190	130	38	100	#
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	84	95
Nickel	mg/kg	1	Metals-020	<1	1	35	27	26	102	90
Zinc	mg/kg	1	Metals-020	<1	1	140	120	15	99	74

**Result Definitions**

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

## Quality Control Definitions

<b>Blank</b>	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.
<b>Duplicate</b>	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.
<b>Matrix Spike</b>	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.
<b>LCS (Laboratory Control Sample)</b>	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.
<b>Surrogate Spike</b>	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

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.

Note: Samples 310898-1-4 were sub-sampled from jars provided by the client.

8 metals in soil - # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.



# 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, Winnellie, NT 0820  
☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

[Copyright and Confidential]

Company:	Phil Clifton & Assoc		Client Project Name/Number/Site etc (ie report title):	North Richmond	
Contact Person:			PO No. (if applicable):		
Project Mgr:			Envirolab Quote No.:		
Sampler:			Date results required:	<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	
Address:			Or choose:		
Phone:		Mob:	Note: Inform lab in advance if urgent turnaround is required - surcharges apply		
Email Results to:	Phil.Clifton@pccifton.com		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	Com	bo	5A																Provide as much information about the sample as you can
1	1	SP	17.11.22	Sasl	✓																		
2	2	"	"	"	✓																		
3	3	"	"	"	✓																		
4	4	"	"	"	✓																		

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):	Phil Clifton & Assoc	Received by (Company):	ESSTD	Lab Use Only	
Print Name:	Edvin Babela	Print Name:	Christine	Job number:	310898
Date & Time:	17.11.22 2:10 PM	Date & Time:	17/11/22 1430	Temperature:	19°C
Signature:		Signature:		Security seal:	Intact / Broken / None
				TAT Req - SAME day / 1 / 1 / 2 / 3 / 4 / STD	



## SAMPLE RECEIPT ADVICE

### Client Details

<b>Client</b>	P Clifton & Assoc
<b>Attention</b>	Phil Clifton

### Sample Login Details

<b>Your reference</b>	North Richmond
<b>Envirolab Reference</b>	310898
<b>Date Sample Received</b>	17/11/2022
<b>Date Instructions Received</b>	17/11/2022
<b>Date Results Expected to be Reported</b>	18/11/2022

### Sample Condition

<b>Samples received in appropriate condition for analysis</b>	Yes
<b>No. of Samples Provided</b>	4 Soil
<b>Turnaround Time Requested</b>	1 day
<b>Temperature on Receipt (°C)</b>	14
<b>Cooling Method</b>	Ice Pack
<b>Sampling Date Provided</b>	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:*



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBs in Soil	Acid Extractable metals in soil	TCLP Preparation - Acid	Asbestos ID - soils
1-SP	✓	✓	✓	✓	✓	✓	✓	✓
2-SP	✓	✓	✓	✓	✓	✓	✓	✓
3-SP	✓	✓	✓	✓	✓	✓	✓	✓
4-SP	✓	✓	✓	✓	✓	✓	✓	✓

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.



## **SUMMARY TABLE OF ANALYTICAL RESULTS**



Table 1 – Summary of Analytical Results 20 November 2022

Richard Crookes Constructions – Stockpiled Fill Soil in the Medical Centre Demolition Area at St John of God Richmond Hospital, North Richmond NSW

Sampled Thursday 17 November 2022

Analyte	Sample 1 Stockpile - North 310898-1		Sample 2 Stockpile - East 310898-2	Sample 3 Stockpile - South 310898-3	Sample 4 Stockpile - South 310898-4	NSW EPA Waste Classification General Solid Waste Threshold Levels			NSW EPA Waste Classification
	Total concentration (mg/kg)	TCLP Concentration (mg/L)	Total concentration (mg/kg)	Total Concentration (mg/kg)	Total concentration (mg/kg)	CT1 concentration (mg/kg)	SCC1 concentration (mg/kg)	TCLP1 concentration (mg/L)	
Sample depth	Stockpile 0.1m		Stockpile 0.1m	Stockpile 0.1m	Stockpile 0.1m	-	-	-	-
Arsenic	7	-	7	5	8	100	500	5	General solid waste
Cadmium	<0.4	-	<0.4	<0.4	<0.4	20	100	1	General solid waste
Chromium	9	-	10	9	10	100	1900	5	General solid waste
Copper	32	-	32	27	20	-	-	-	General solid waste
Lead	190	0.1	81	54	42	100	1500	5	General solid waste
Mercury	<0.1	-	<0.1	<0.1	<0.1	4	50	0.2	General solid waste
Nickel	35	-	20	17	12	40	1050	2	General solid waste
Zinc	140	-	86	71	68	-	-	-	General solid waste
Benzene	<0.2	-	<0.2	<0.2	<0.2	10	18	0.5	General solid waste
Toluene	<0.5	-	<0.5	<0.5	<0.5	288	1080	14.4	General solid waste
Ethyl Benzene	<1.0	-	<1.0	<1.0	<1.0	600	1080	30	General solid waste
Total Xylenes	<1.0	-	<1.0	<1.0	<1.0	1000	1800	50	General solid waste
TPH C6-9	<25	-	<25	<25	<25	650	650	N/A	General solid waste
TPH C10-40	<100	-	<100	<100	<100	10000	10000	N/A	General solid waste
Total PAH	<0.2	-	<0.2	<0.2	<0.2	200	200	N/A	General solid waste
Benzo(a)pyrene	<0.05	-	<0.05	<0.05	<0.05	0.8	10	0.04	General solid waste
OCP (Pesticides)	<0.1	-	<0.1	<0.1	<0.1	<50	<50	N/A	General solid waste
PCB	<0.1	-	<0.1	<0.1	<0.1	<50	<50	N/A	General solid waste
Asbestos in soil	Visible ACM present	-	Visible ACM present	Visible ACM present	Visible ACM present	-	-	-	Special waste asbestos