

Visual Lead Paint Clearance

Yarralumla Primary School

30 November 2019

Certificate of approval for issue of documents

Document Name	Lead Paint Clearance – Yarralumla Primary School Canteen/Pantry		
Date of Issue	6 December 2019	Job Number	T-01035
Client	ACT Property Group		
Sampling and Report Preparation	Reviewed	Approved	
Robson Environmental Pty. Ltd.	Robson Environmental Pty. Ltd.	Robson Environmental Pty. Ltd.	

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1 Introduction

Robson Environmental Pty. Ltd. (Robson) undertook a visual lead clearance inspection following the removal of benches, shelves and walls painted with previously identified lead paint in the Yarralumla Primary Canteen and Pantry which was conducted on Saturday 30 November 2019.

1.1 Objective

The purpose of the inspection was to assess the success of the removal of lead paint covered surfaces within the Canteen/Pantry owing to concerns regarding future possible contamination of lead paint in these areas.

1.2 Scope

The assessment consisted of a visual inspection of the Canteen and Pantry where the benches, shelves and walls covered with lead paint had been removed, as well as assessing the areas where the waste materials had been transported or the workers had been during the remediation works.

2 Background

Lead (as lead carbonate) is found extensively in paints used in homes as well as in commercial and industrial buildings built before 1970 (Standards Australia, 2017). Lead from lead-containing paint may present health exposure risks if it becomes mobile in the environment or ingested.

3 Methods

The Canteen and Pantry were visually inspected to ensure all lead paint covered surfaces, lead paint fragments, and associated debris was completely removed.

4 Results

4.1 Visual Assessment

Visual assessments of the worksites on Saturday 30 November 2019 following the removal work did not identify any lead paint covered surfaces, and lead paint fragments on the ground surfaces or in the surrounding areas.

Figure 1 to Figure 5 show representative areas of the remediation works, demonstrating that no lead paint fragments remain after the remediation works.



Figure 1: Canteen bench top following remediation works



Figure 2: Canteen bench top following remediation works



Figure 3: Canteen bench top following remediation works

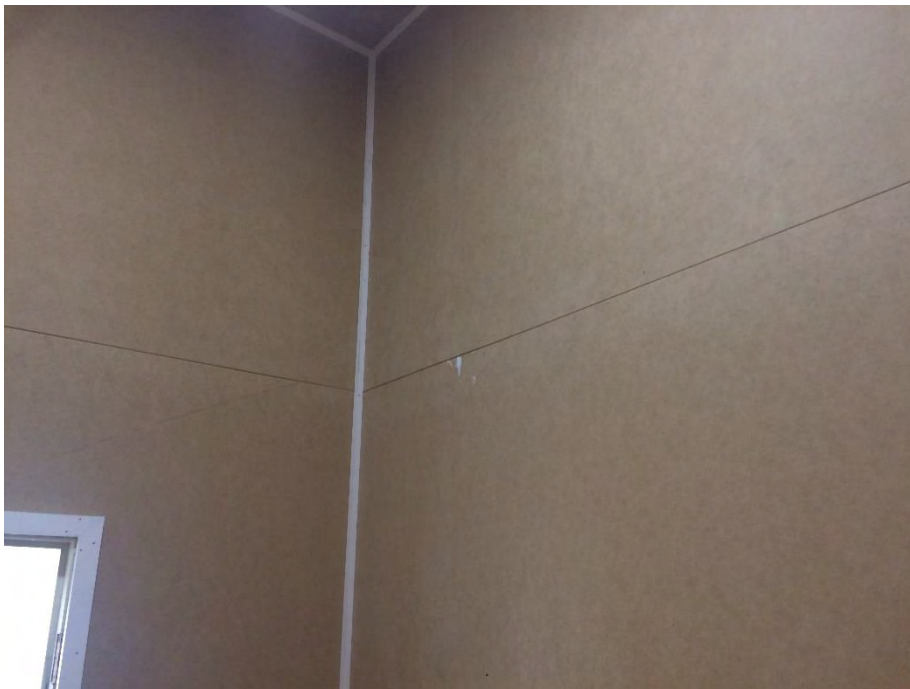


Figure 4: Canteen Pantry following the remediation works



Figure 5: Canteen Pantry following the remediation works

5 Conclusion

The visual lead paint clearance inspections undertaken for the Canteen and Pantry after remediation works on Saturday 30 November 2019 was acceptable. There was no visual sign of lead paint fragments remaining on any of the surrounding surfaces, and these areas are now safe to be reoccupied.

6 Limitations

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

The report, including any risk assessment presented, is based on the information obtained by Robson at the time of sampling. Any variation in the environment, activities, methods, practices, products, or equipment used may change exposures to hazards, invalidating the presented risk assessment. Robson recommends that risks be re-assessed prior to making any changes to the aforementioned factors.

The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

7 References

- Standards Australia, 2017, AS/NZS4361.2-2017: *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*, Standards Australia, Australia.
- U.S. Department of Housing and Urban Development 2012, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Second Edition*, Office of Health Homes and Lead Hazard Control, Washington, DC.

Ebner, Joanne

From: Feehan, Andrew
Sent: Monday, 2 December 2019 2:07 PM
To: Wickham, Ilona
Cc: Watson, Geoffrey; Ebner, Joanne
Subject: FW: Yarralumla Primary School - Lead Paint Removal Canteen/Pantry
Attachments: T-08792 - Yarralumla Primary and Preschool Fibre Identification Cert of Analysis.pdf

UNCLASSIFIED

Hi Ilona,

The flooring tiles in the canteen came back negative for acm.

Regards,

Andrew Feehan
 Project Officer
 ACT Property Group / Project Team
 Chief Minister, Treasury and Economic Development Directorate | ACT Government
 M: 0419 606 339 | T: 02 6213 0730 | F: 02 6213 0735
 E: Andrew.feehan@act.gov.au
 255 Canberra Avenue, Fyshwick, ACT 2609,
 PO Box 777 Fyshwick ACT 2609 | www.cmd.act.gov.au

From: [REDACTED]
Sent: Monday, 2 December 2019 1:52 PM
To: Feehan, Andrew <Andrew.Feehan@act.gov.au>
Subject: FW: Yarralumla Primary School - Lead Paint Removal Canteen/Pantry

Hey Andrew,

Just FYI for you in regards to the weekend works at Yarralumla Primary School. [REDACTED] from [REDACTED] just said to send through to Evan but [REDACTED] sent me through your correspondence with [REDACTED] so thought I should forward the information on to you as well.

The vinyl floor tiles were found to be non-asbestos, and I have informed [REDACTED] of this in the morning as I believe they are back doing some work today. I will send you through the complete Material Analysis report shortly.

If you have any questions about the work please don't hesitate to contact me.

Regards,



Email: [REDACTED]
Web: www.robsonenviro.com.au

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From: [REDACTED]

Sent: Saturday, 30 November 2019 6:12 PM

To: evan.byrne@act.gov.au

C
<[REDACTED]>

Subject: Yarralumla Primary School - Lead Paint Removal Canteen/Pantry

Good evening Evan,

Following the lead paint removal works today a visual clearance was conducted which has passed. Lead dust monitoring was conducted during the works. Results for these filters is awaiting them to be sent off and analysed. Once the results come back I will send them out to you as well as the clearance certificate which is awaiting the confirmation of the results.

During the removal works some old vinyl floor tiles were uncovered in the pantry and [REDACTED] highlighted their presence to me. I have taken a sample of these and will put them into the lab to be tested for asbestos, the results of which I will send out to you Monday morning once they have been confirmed. Depending on the result either [REDACTED] will be able to pull them up on Monday if they are non-asbestos, otherwise if they are asbestos they will need to not be disturbed, or if they are to be disturbed an asbestos removalist will have to remove prior to further works.

The canteen/pantry is safe for reoccupation and to be accessed for further works.

If you have any questions about today's works or anything else please don't hesitate to contact me.

Regards,
[REDACTED]



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Fibre Identification Certificate of Analysis

Report Number: T-08792
R.E. Job Number: T01035

Date of Report: 2/12/2019 Samples Taken by: [REDACTED]

Page 1 of 1

Client Details

Client: ACT Property Group
Attention: Evan Byrne
Received: 30/11/2019
Client Reference: Yarralumla Primary and Preschool
Email: Evan.Byrne@act.gov.au

Laboratory Details

Address: 140 Gladstone Street, Fyshwick, Canberra 2609
Manager: [REDACTED]
Telephone: 02 6239 5656
Fax: 02 6239 5669
Email: hazmat@robsonenviro.com.au

Test Specification(s) Employed: AS4964 (2004) & In-House Procedure No.2

Methodology Summary

Samples of material are examined to determine the presence of asbestos fibres using AS4964 (2004) & In-House Procedure No.2 i.e. Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by Polarised Light Microscopy (PLM) in conjunction with Dispersion Staining (DS). Unequivocal identification of asbestos minerals present is made by assessing fibre properties to see whether the values are typical and consistent with published data. This provides a reasonable degree of certainty to determine whether a fibre under investigation is asbestiform or not. Careful application of the test procedure provides sufficient diagnostic clues to allow unequivocal identification of asbestos types, and so, to determine whether a sample contains asbestos or not. If sufficient diagnostic clues are absent, then positive identification of fibrous asbestos is not possible.

Client Supplied Samples

Robson Environmental is not responsible for the accuracy or competence of sampling carried by third parties. Sample location(s) and/or sample type(s) of third party samples delivered to the laboratory are given by the client at the time of delivery. Under these circumstances, Robson Environmental cannot be held responsible for the interpretation of the results shown. When the test certificate indicates that bulk samples were taken by the client, they are outside the scope of our NATA Accreditation for sampling. Robson Environmental takes responsibility of information reported only when a staff member takes the sample(s).

Reporting of Results

'Asbestos Detected': Asbestos detected by Polarised Light Microscopy (PLM), including Dispersion Staining (DS)

'No Asbestos Detected': No Asbestos detected by Polarised Light Microscopy (PLM), including Dispersion Staining (DS)

'UMF Detected': Mineral fibres of unknown type detected by Polarised Light Microscopy (PLM), including Dispersion Staining (DS). Confirmation by another independent analytical technique may be necessary.

"Hand-picked" refers to small discrete amounts of asbestos unevenly distributed in a large body of non-asbestos material.

Non asbestos fibres such as "Organic" and "Synthetic Mineral Fibres" detected in samples will be marked with an *. Please refer to non asbestos fibre table beneath main table.

Limit of Detection & Reporting Limit

Known limitations of the test procedure using Polarised Light Microscopy (PLM) are:

- PLM is a qualitative technique only;
- It does not cover identification of airborne or water-borne asbestos;
- The less encountered asbestos mineral fibres actinolite, anthophyllite and tremolite exhibit a wide range of optical properties that preclude unequivocal identification by PLM and Dispersion Staining (DS). Thus, the method is used to positively identify the three major asbestos minerals: amosite ("brown"), chrysotile ("white") and crocidolite ("blue");
- Valid identification requires that the sample material contains a sufficient quantity of the unknown fibres in excess of the practical detection limit used (in this case, PLM and Dispersion Staining, which has a calculated practical detection limit of 0.01-0.1% equivalent to 0.1-1g/kg (AS4946-2004:App. A4).

Results relate only to the sample(s) submitted for testing.

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Sample No.	Client Ref.	Location	Physical Structure	Sample Description	Analysis of Fibrous Content
C1968		Pantry - Brown floor tiles beneath floor covering	Vinyl floor tile	1g	No Asbestos Detected*

Non Asbestos Fibre Table

* C1968 - Organic Fibres Detected



Robson Approved Identifier



No. 3181

Accredited for compliance with ISO/IEC 17025 - Testing



Robson Approved Signatory

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

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Client: ACT Property Group

T01035_T-08792_Yarralumla Primary and Preschool-Fibre Identification Certificate of Analysis_20191202

Airborne Lead Monitoring During Lead Paint Remediation

Yarralumla Primary School

November 30, 2019

Certificate of approval for issue of documents

Document Name	Airborne Lead Monitoring During Lead Paint Remediation – Yarralumla Primary		
Date of Issue	6 December 2019	Job Number	T01035
Client	ACT Property Group	Client Reference	WO 31266
Site Sampling and Report Preparation	Reviewed		Approved
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1 Introduction

Robson Environmental Pty Ltd (Robson) undertook an assessment of airborne lead particulate during the removal of lead paint covered surfaces and associated lead paint fragments at Yarralumla Primary School on November 30, 2019.

1.1 Objective

The purpose of the assessment was to measure airborne lead particulate during remediation works to assess whether the work itself was likely to present a risk to health from airborne lead dust exposure or spread lead paint contamination by dispersing lead particulate through the air.

1.2 Scope

The assessment consisted of static air monitoring to quantify airborne lead particulate concentrations during remediation works around Yarralumla Primary School. The areas of assessment were:

- The canteen and pantry on November 30, 2019

2 Methods

3 Results and Discussion

4 Conclusions

The results of sampling for airborne lead particulate during removal of lead paint at Yarralumla Primary School on November 30, 2019, did not detect airborne lead in any sample at a level above the detection limit. As such, there is not expected to be a risk to health from airborne lead dust exposure from these works, and the work is not expected to have spread lead paint contamination by dispersing lead particulate through the air.

5 Limitations

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

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assessment. Robson recommends that risks be re-assessed prior to making any changes to the aforementioned factors.

The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

6 References

- Safe Work Australia, 2018, *Workplace Exposure Standards for Airborne Contaminants*, Safe Work Australia, Australia
- Standards Australia, 2009, *Method for sampling and gravimetric determination of inhalable dust AS3640 Workplace atmospheres*, Standards Australia

Appendix 1 Blank corrected airborne lead concentrations during remediation works

Sample No.	Date	Sample Location	Lead detected (µg/filter)	Maximum possible air concentration (mg/m ³)
T01035 – Pb80	30/11/2019	Outside pantry	<1	<0.001
T01035 – Pb81	30/11/2019	On stovetop bench	<1	<0.001
T01035 – Pb82	30/11/2019	On island bench south end	<1	<0.001

Appendix 2 Laboratory Reports



CERTIFICATE OF ANALYSIS 232278

Client Details

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	<u>T-01035</u>
Number of Samples	4 Filter
Date samples received	04/12/2019
Date completed instructions received	04/12/2019

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.

Report Details

Date results requested by	04/12/2019
Date of Issue	04/12/2019
NATA Accreditation Number	
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Results Approved By



Authorised By



Client Reference: T-01035

Lead on filter					
Our Reference		232278-1	232278-2	232278-3	232278-4
Your Reference	UNITS	Pb80	Pb81	Pb82	Pb83
Date Sampled		30/11/2019	30/11/2019	30/11/2019	30/11/2019
Type of sample		Filter	Filter	Filter	Filter
Date prepared	-	04/12/2019	04/12/2019	04/12/2019	04/12/2019
Date analysed	-	04/12/2019	04/12/2019	04/12/2019	04/12/2019
Lead	µg/filter	<1	<1	<1	<1



Client Reference: T-01035

Method ID	Methodology Summary
Metals-006	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.



Client Reference: T-01035

QUALITY CONTROL: Lead on filter					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			04/12/2019					04/12/2019	
Date analysed	-			04/12/2019					04/12/2019	
Lead	µg/filter	1	Metals-006	<1					104	



Client Reference: T-01035

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.	

Client Reference: T-01035

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, [REDACTED] 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.

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 [REDACTED] 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.

From: [Flynn, Charlie](#)
To: [Watson, Geoffrey](#)
Subject: Fwd: T01035 - Yarralumla Primary School Lead Air Monitoring and Potential Dust Contamination
Date: Tuesday, 21 July 2020 6:51:07 PM
Attachments: [image001.png](#)
[image002.png](#)
[T01035_LeadMonitoringLeadDust_Gambarri&Montesorri_20200706.pdf](#)

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From: Flynn, Charlie <Charlie.Flynn@act.gov.au>
Sent: Friday, July 17, 2020 8:22:05 PM
To: [REDACTED]
Subject: Fwd: T01035 - Yarralumla Primary School Lead Air Monitoring and Potential Dust Contamination

Fyi

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From: Flynn, Charlie <Charlie.Flynn@act.gov.au>
Sent: Friday, July 17, 2020 8:02 pm
To: Moss, Samantha (ACTEDU)
Subject: Fwd: T01035 - Yarralumla Primary School Lead Air Monitoring and Potential Dust Contamination

Hi Sam please see attached testing results from the window removal. Are we able to not have classes in the areas we have removed the windows until We have a clearance for the carpet and areas outlined within the report kind regards Charlie Flynn

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Airborne Lead Monitoring and Potential Lead Dust Contamination Assessment During Window Frame Removal

Yarralumla Primary School

July 2020

Certificate of approval for issue of documents

Document Name	T01035_LeadMonitoringLeadDust_Gambarri&Montesorri_20200706		
Date of Issue	17 July 2020	Job Number	T01018
Client	ACT Property Group		
Site Sampling and Report Preparation	Reviewed	Approved	
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T01035_LeadMonitoringLeadDust_Gambarri&Montesorri_20200706





1 Introduction

Robson Environmental Pty Ltd (Robson) undertook control monitoring of airborne lead particulate during the removal of lead paint covered window frames and assessment of the potential lead dust contamination within the classrooms and internal areas of the Gambarri Centre and Montessori Preschool at Yarralumla Primary School on behalf of ACT Property Group from 06 July to 10 July 2020 (first week of two weeks of this work).

1.1 Objective

The purpose of the control monitoring was to assess whether controls in place during removal of the lead painted window frames were sufficient to:

- prevent worker exposure to airborne lead particulate produced during the removal works; and to
- prevent indoor and exterior contamination with lead particulate from occurring.

1.2 Scope

The assessment was conducted in the classrooms, internal and external area of the Gambarri Centre and Montessori Preschool and consisted of:

- Collection of representative samples from the carpet floor surrounding the lead paint covered window frames removal work area and outside the work area to assess potential lead dust contamination, as per AS/NZS 4361.2:2017 *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*;
- Collection of four control static air monitoring samples each day for lead particulate in representative locations surrounding the lead painted window frame removal areas from the 06 July to-10 July 2020; and
- Visual assessment of classrooms and internal areas for potential lead dust contamination.





Table 1: Airborne lead sampling details from 06 – 10/07/2020

Sample Number	Location	Sample Time (mins)	Sample date	Volume (L)
Pb84	Adjacent to windows being removed from Classroom 015	458	06/07/20	916
Pb85	Adjacent to windows being removed from the north end of Classroom 014	451	06/07/20	902
Pb86	Adjacent to windows being removed from the south end of Classroom 014	452	06/07/20	904
Pb87	Adjacent to windows being removed from near the Teacher's desk in Classroom 013	445	06/07/20	890
Pb88	Field Blank	-	06/07/20	-
Pb89	Adjacent to door being removed from north west entrance corridor 004 to the Gambarri Centre	422	07/07/20	844
Pb90	Adjacent to windows being removed from south end of Music Room 017	423	07/07/20	846
Pb91	Adjacent to windows being removed from north end of Music Room 017	423	07/07/20	846
Pb92	Exterior adjacent to windows being removed from Music Room 017	417	07/07/20	834
Pb93	Field Blank	-	07/07/20	-
Pb94	In north west entrance corridor 004 to the Gambarri Centre	432	08/07/20	864
Pb95	Adjacent to windows being removed from north end of Music Room 017	426	08/07/20	852
Pb96	Adjacent to windows being removed from east end of Music Room 017	422	08/07/20	844
Pb97	Exterior adjacent to windows being removed from Music Room 017	417	08/07/20	834
Pb98	Field Blank	-	08/07/20	-
Pb99	Adjacent to windows being removed from north end of Music Room 017	422	09/07/20	844
Pb100	Adjacent to windows being removed from east end of Music Room 017	421	09/07/20	842
Pb101	Adjacent to windows being removed from south west end of Montessori Playroom 002	411	09/07/20	822
Pb102	Adjacent to windows being removed from south east end of Montessori Playroom 010	409	09/07/20	818
Pb103	Field Blank	-	09/07/20	-
Pb104	Adjacent to windows being removed from west end of Montessori Playroom 002	404	10/07/20	808
Pb105	Adjacent to windows being removed from east end of Montessori Playroom 010	402	10/07/20	804
Pb106	Field Blank	-	10/07/20	-











4 Results

4.1 Observations

Poor lead containment practices were observed during air monitors setups in morning and air monitors pickup in the afternoon. Inadequate precautions before works commencing included furniture remaining in the work area not covered with plastic sheeting to prevent dust from settling on surfaces or entering fabrics (shown in Figure 5), as well as a lack of appropriate ground sheets in the interior and exterior work areas on the first day of works commencing (shown in Figure 5, Figure 6, and Figure 9 to Figure 13).

The client was notified of this issue and drop sheets were used on following days, however ineffectual taping was evident throughout the course of works (shown in Figure 7 & Figure 8). As a result, debris consisting of flakes of paint were visually assessed beneath drop sheets to the interior carpet lining and to surrounding surfaces (as shown in Figure 7 – Figure 10). Exterior drop sheets on garden beds beneath window frames were also not present (as shown in Figure 9 – Figure 13).



Figure 5: No drop sheets on furniture



Figure 6: No drop sheet

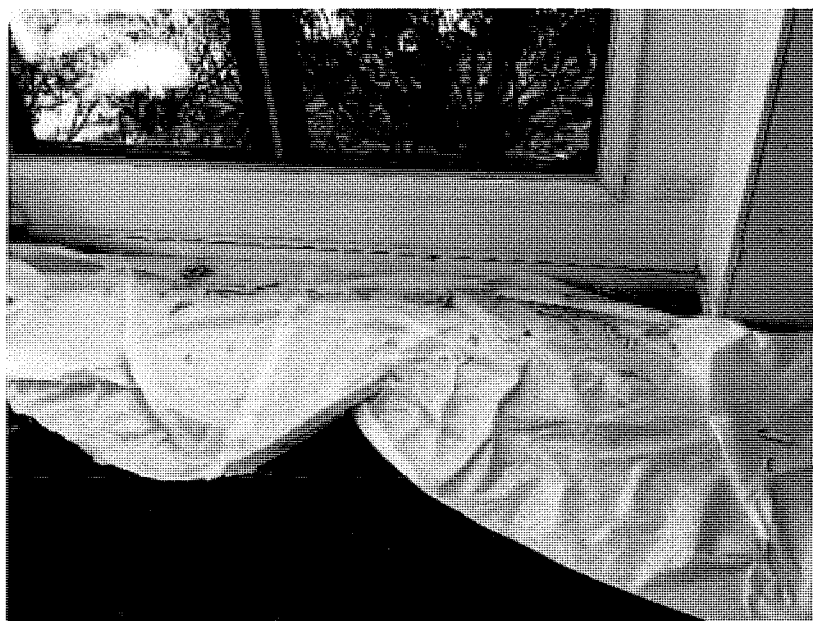


Figure 7: Ineffectual taping



Figure 8: Ineffectual taping



Figure 9: No drop sheets to interior or exterior



Figure 10: Inadequate drop sheets



Figure 11: Inadequate drop sheets



Figure 12: No exterior drop sheet



Figure 13: No exterior drop sheet

4.2 Static Air Sampling

Lead particulate was detected in all air samples on July 6, in three of the four samples on July 9 and in two of the four samples on 10 July at concentrations ranging from 0.001 – 0.009 mg/m³ as shown in Table 5. The remaining air samples were below the detection limit. Laboratory results are attached at Appendix 1.



Table 5: Summary of results from airborne lead sampling during remediation works

Sample No.	Date	Sample Location	Lead detected ($\mu\text{g}/\text{filter}$)	Air concentration (mg/m^3)
Pb84	06/07/2020	Adjacent to window being removed from Classroom 015	2	0.002
Pb85	06/07/2020	Adjacent to window being removed from the north end of Classroom 014	8	0.009
Pb86	06/07/2020	Adjacent to window being removed from the south end of Classroom 014	8	0.009
Pb87	06/07/2020	Adjacent to window being removed from near the Teacher's desk in Classroom 013	7	0.008
Pb88	06/07/2020	Field Blank	<1	<0.001
Pb89	07/07/2020	Adjacent to door being removed from north west entrance corridor 004 to the Gambarri Centre	<1	<0.001
Pb90	07/07/2020	Adjacent to windows being removed from south end of Music Room 017	<1	<0.001
Pb91	07/07/2020	Adjacent to windows being removed from north end of Music Room 017	<1	<0.001
Pb92	07/07/2020	Exterior adjacent to windows being removed from Music Room 017	<1	<0.001
Pb93	07/07/2020	Field Blank	<1	<0.001
Pb94	08/07/2020	In north west entrance corridor 004 to the Gambarri Centre	<1	<0.001
Pb95	08/07/2020	Adjacent to windows being removed from north end of Music Room 017	<1	<0.001
Pb96	08/07/2020	Adjacent to windows being removed from east end of Music Room 017	<1	<0.001
Pb97	08/07/2020	Exterior adjacent to windows being removed from Music Room 017	<1	<0.001
Pb98	08/07/2020	Field Blank	<1	<0.001
Pb99	09/07/2020	Adjacent to windows being removed from north end of Music Room 017	5	0.006
Pb100	09/07/2020	Adjacent to windows being removed from east end of Music Room 017	6	0.007
Pb101	09/07/2020	Adjacent to windows being removed from south west end of Montessori Playroom 002	<1	<0.001
Pb102	09/07/2020	Adjacent to windows being removed from south east end of Montessori Playroom 010	1	0.001
Pb103	09/07/2020	Field Blank	<1	<0.001
Pb104	10/07/2020	Adjacent to windows being removed from west end of Montessori Playroom 002	2	0.002
Pb105	10/07/2020	Adjacent to windows being removed from east end of Montessori Playroom 010	6	0.007
Pb106	10/07/2020	Field Blank	<1	<0.001



4.3 Surface Dust Swabs

Lead was detected in all surface samples, as shown in Table 6. Surface samples from the north side of Classroom 013 returned results above the project criteria, however the control samples from Gambarri Centre Classroom exceeded this criterion too, so surface lead contamination within Classroom 13 may be within the range of normal background contamination. The full laboratory report is attached at Appendix 1.

Table 6: Blank corrected surface lead sampling results

Sample Number	Location	Criteria Level (mg/m ²)	Concentration (mg/m ²)
X2438	Gambarri Centre Classroom 013 to western side carpet beneath drop sheet adjacent removal area	<0.11	0.13
X2439	Gambarri Centre Classroom 013 to northern side carpet beneath drop sheet adjacent removal area	<0.11	0.36
X2442	Gambarri Centre Classroom 026 to eastern side carpet	<0.11	0.13
X2443	Gambarri Centre Classroom 027 to eastern side carpet	<0.11	0.31

5 Discussion

While comparison to workplace exposure standards is not appropriate, as these samples were collected in static locations rather than as personal samples, for context the 8-hour time-weighted average exposure standard for lead particulate is 0.05mg/m³ (Safe Work Australia, 2019). The highest concentration of lead particulate in these air samples is 18% of this level, and given the location of the static samples compared to worker locations it is likely that worker exposures were much higher, and could have exceeded the exposure standard.

As well as indicating a possible risk to health for workers conducting removal works, these results also suggest that contamination of areas surrounding the windows are likely to have been contaminated with lead dust.

Surface dust samples results showed contamination on surfaces within Classroom 13, but levels of contamination may be within the range of normal background contamination for this building. Nevertheless, given the extensive visual paint contamination observed onsite, controls measure in place were not sufficient to contain lead paint debris and dust during the removal of window frames.

6 Conclusions

The results of controls assessment for lead paint covered window frames removal at the Gambarri Centre and Montessori Preschool at Yarralumla Primary School on behalf of ACT Property Group from 06 July to 10 July 2020 found that controls in place were likely to be inadequate to protect worker health and did not prevent lead contamination of indoor and outdoor areas from occurring.

The results of sampling for airborne lead particulate during the window removal found measurable concentrations of lead in 9 of the 16 samples. Airborne concentrations were high enough in these static samples to suggest that workers may have experienced lead particulate exposure exceeding the Safe Work Australia workplace exposure standard of 0.05 mg/m³.



Poor containment controls were observed on site, and visible contamination with flakes of paint of surface inside and outside of classrooms was also observed. While a small number of surface contamination samples from areas adjacent to where windows were removed returned contamination at levels similar to those in comparison background locations, it is expected that these works have contributed to surface lead dust contamination in affected classrooms, and to the outside of the building.

For any future works of this nature additional controls measures should be put in place to prevent surface contamination and to protect worker health in compliance with WHS legislation.

7 Recommendations

1. All hard surfaces in affected classrooms should be wiped down and carpeted surfaces should be cleaned using a vacuum fitted with a HEPA filter.
2. Further surface dust sampling is recommended to confirm that this cleaning has been adequate to minimise exposure risk for building occupants.
3. For future works it is recommended that further control measures are implemented to eliminate potential exposure risks. If not contained and managed appropriately, dust emissions generated during minor disturbance of lead paint can be difficult to remove from the environment and may pose an exposure risk to current and future building occupants. Lead dust has been shown to remain in carpets for many years and can be inadvertently transferred to other areas of buildings.
 - a. As an absolute minimum disposable ground sheets of sufficient size must be placed to the interior and exterior of the building during removal of windows to contain all the paint waste generated below the work area.
 - b. Controls should be used to minimise the amount of dust produced during activities which disturb the lead paint.
 - c. Worker exposure controls should also be in place (e.g. PPE and personal monitoring).
 - d. All people not involved in disturbing the lead paint should be removed from the area.
4. It is recommended that the controls given in the Lead Paint Management Plan for Yarralumla Primary School [T01035_LPMP_Yarralumla_20191125] be reviewed and followed for all works which disturb lead paint. Compliance with these controls should be made mandatory for all contractors engaged to undertake any works which disturb lead paint.

8 Limitations

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

The report, including any risk assessment presented, is based on the information obtained by Robson at the time of sampling. Any variation in the environment, activities, methods, practices, products, or equipment used may change exposures to hazards, invalidating the presented risk assessment. Robson recommends that risks be re-assessed prior to making any changes to the aforementioned factors.



The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

9 References

- Standards Australia 2009, AS3640-2009: Workplace atmospheres – Method for sampling and gravimetric determination of inhalable dust, Standards Australia, Australia
- U.S. Department of Housing and Urban Development 2012, Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Second Edition, Office of Health Homes and Lead Hazard Control, Washington, DC.
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- National Institute for Occupational Safety and Health (NIOSH), 2003, NIOSH Method 9102: Elements on Wipes, NIOSH Manual of Analytical Methods (NMAM), Fourth Edition, NIOSH, USA
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- Safe Work Australia, 2018, Workplace Exposure Standards for Airborne Contaminants, Safe Work Australia, Australia
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- Standards Australia, 1998, AS4361.2-1998, Guide to lead paint management, Part 2: Residential and commercial buildings, Standards Australia, Australia
- Standards Australia, 2017, AS4361.2-2017, Guide to hazardous paint management, Part 2: Lead paint in residential and commercial buildings, Standards Australia, Australia



Appendix 1 Laboratory Reports



CERTIFICATE OF ANALYSIS 246531

Client Details	
Client	Robson Environmental Pty Ltd
Attention	[Redacted]
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details	
Your Reference	T01035
Number of Samples	5 filter
Date samples received	08/07/2020
Date completed instructions received	08/07/2020

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.	

Report Details	
Date results requested by	13/07/2020
Date of Issue	10/07/2020
NATA Accreditation Number	[Redacted] This document shall not be reproduced except in full.
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Results Approved By



Authorised By



Page | 1 of 6

Client Reference: T01035

Lead on filter						
Our Reference		246531-1	246531-2	246531-3	246531-4	246531-5
Your Reference	UNITS	PB84	PB85	PB86	PB87	PB88
Date Sampled		6/07/2020	6/07/2020	6/07/2020	6/07/2020	6/07/2020
Type of sample		filter	filter	filter	filter	filter
Date prepared	-	09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Date analysed	-	09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Lead	µg/filter	2	8	8	7	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.

Client Reference: T01035

QUALITY CONTROL: Lead on filter						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			09/07/2020					09/07/2020	
Date analysed	-			09/07/2020					09/07/2020	
Lead	µg/filter	1	Metals-020/021/022	<1					94	

Client Reference: T01035

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

Client Reference: T01035

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, [REDACTED] 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.

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 [REDACTED] 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.

CERTIFICATE OF ANALYSIS 246632**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	<u>T01035</u>
Number of Samples	5 Filter
Date samples received	09/07/2020
Date completed instructions received	09/07/2020

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.

Report Details

Date results requested by	14/07/2020
Date of Issue	13/07/2020

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Results Approved By**Authorised By**

Client Reference: T01035

Lead on filter						
Our Reference		246632-1	246632-2	246632-3	246632-4	246632-5
Your Reference	UNITS	PB89	PB90	PB91	PB92	PB93
Date Sampled		07/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
Type of sample		Filter	Filter	Filter	Filter	Filter
Date prepared	-	10/07/2020	10/07/2020	10/07/2020	10/07/2020	10/07/2020
Date analysed	-	10/07/2020	10/07/2020	10/07/2020	10/07/2020	10/07/2020
Lead	µg/filter	<1	<1	<1	<1	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.

Client Reference: T01035

QUALITY CONTROL: Lead on filter						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			10/07/2020	[NT]	[NT]	[NT]	[NT]	10/07/2020	[NT]
Date analysed	-			10/07/2020	[NT]	[NT]	[NT]	[NT]	10/07/2020	[NT]
Lead	µg/filter	1	Metals-020/021/022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]

Client Reference: T01035

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

Client Reference: T01035

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, [REDACTED] 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.

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 [REDACTED] 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.

CERTIFICATE OF ANALYSIS 246711**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	<u>T01035</u>
Number of Samples	5 Filter
Date samples received	10/07/2020
Date completed instructions received	10/07/2020

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.

Report Details

Date results requested by	17/07/2020
Date of Issue	15/07/2020

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Results Approved By**Authorised By**

Client Reference: T01035

Lead on filter						
Our Reference		246711-1	246711-2	246711-3	246711-4	246711-5
Your Reference	UNITS	T01035-Pb94	T01035-Pb95	T01035-Pb96	T01035-Pb97	T01035-Pb98
Date Sampled		08/07/2020	08/07/2020	08/07/2020	08/07/2020	08/07/2020
Type of sample		Filter	Filter	Filter	Filter	Filter
Date prepared	-	15/07/2020	15/07/2020	15/07/2020	15/07/2020	15/07/2020
Date analysed	-	15/07/2020	15/07/2020	15/07/2020	15/07/2020	15/07/2020
Lead	µg/filter	<1	<1	<1	<1	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.

Client Reference: T01035

QUALITY CONTROL: Lead on filter						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/07/2020					15/07/2020	
Date analysed	-			15/07/2020					15/07/2020	
Lead	µg/filter	1	Metals-020/021/022	<1					87	

Client Reference: T01035

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

Client Reference: T01035

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.

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Measurement Uncertainty estimates are available for most tests upon request.

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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.

CERTIFICATE OF ANALYSIS 246820**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	T01035
Number of Samples	5 Filter
Date samples received	13/07/2020
Date completed instructions received	13/07/2020

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.

Report Details

Date results requested by	20/07/2020
Date of Issue	16/07/2020

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Results Approved By**Authorised By**

Client Reference: T01035

Lead on filter						
Our Reference		246820-1	246820-2	246820-3	246820-4	246820-5
Your Reference	UNITS	PB99	PB100	PB101	PB102	PB103
Date Sampled		09/07/2020	09/07/2020	09/07/2020	09/07/2020	09/07/2020
Type of sample		Filter	Filter	Filter	Filter	Filter
Date prepared	-	15/07/2020	15/07/2020	15/07/2020	15/07/2020	15/07/2020
Date analysed	-	15/07/2020	15/07/2020	15/07/2020	15/07/2020	15/07/2020
Lead	µg/filter	5	6	<1	1	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.

Client Reference: T01035

QUALITY CONTROL: Lead on filter						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/07/2020					15/07/2020	
Date analysed	-			15/07/2020					15/07/2020	
Lead	µg/filter	1	Metals-020/021/022	<1					91	

Client Reference: T01035

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

Client Reference: T01035

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.

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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.

CERTIFICATE OF ANALYSIS 246916**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	T01035
Number of Samples	3 Filter
Date samples received	14/07/2020
Date completed instructions received	14/07/2020

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.

Report Details

Date results requested by	21/07/2020
Date of Issue	16/07/2020

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Results Approved By**Authorised By**

Client Reference: T01035

Lead on filter				
Our Reference		246916-1	246916-2	246916-3
Your Reference	UNITS	PB104	PB105	PB106
Date Sampled		10/07/2020	10/07/2020	10/07/2020
Type of sample		Filter	Filter	Filter
Date prepared	-	15/07/2020	15/07/2020	15/07/2020
Date analysed	-	15/07/2020	15/07/2020	15/07/2020
Lead	µg/filter	2	6	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Determination of various metals on filters by ICP-AES/MS and or CV/AAS.

Client Reference: T01035

QUALITY CONTROL: Lead on filter					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/07/2020					15/07/2020	
Date analysed	-			15/07/2020					15/07/2020	
Lead	µg/filter	1	Metals-020/021/022	<1					105	

Client Reference: T01035

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

Client Reference: T01035

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.

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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 [REDACTED] 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.

CERTIFICATE OF ANALYSIS 246714**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	T01035
Number of Samples	2 SWAB
Date samples received	10/07/2020
Date completed instructions received	10/07/2020

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.

Report Details

Date results requested by	17/07/2020
Date of Issue	14/07/2020

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Results Approved By**Authorised By**

Client Reference: T01035

Lead in swab			
Our Reference		246714-1	246714-2
Your Reference	UNITS	X2438	X2439
Date Sampled		08/07/2020	08/07/2020
Type of sample		SWAB	SWAB
Date prepared	-	13/07/2020	13/07/2020
Date analysed	-	13/07/2020	13/07/2020
Lead in Swabs	µg/swab	3	8

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Digestion of Dust wipes/swabs and /or miscellaneous samples for Metals determination by ICP-AES/MS and/or CV-AAS

Client Reference: T01035

QUALITY CONTROL: Lead in swab						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/07/2020	[NT]	[NT]	[NT]	[NT]	13/07/2020	[NT]
Date analysed	-			13/07/2020	[NT]	[NT]	[NT]	[NT]	13/07/2020	[NT]
Lead in Swabs	µg/swab	1	Metals-020/021/022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

Client Reference: T01035

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

Client Reference: T01035

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.
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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.
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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.

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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.

CERTIFICATE OF ANALYSIS 247079**Client Details**

Client	Robson Environmental Pty Ltd
Attention	
Address	PO Box 112, Fyshwick, ACT, 2609

Sample Details

Your Reference	<u>T01035</u>
Number of Samples	3 SWAB
Date samples received	16/07/2020
Date completed instructions received	16/07/2020

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.

Report Details

Date results requested by	16/07/2020
Date of Issue	16/07/2020

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Results Approved By

Authorised By

Client Reference: T01035

Lead in swab				
Our Reference		247079-1	247079-2	247079-3
Your Reference	UNITS	X2442	X2443	X2444
Date Sampled		15/07/2020	15/07/2020	15/07/2020
Type of sample		SWAB	SWAB	SWAB
Date prepared	-	16/07/2020	16/07/2020	16/07/2020
Date analysed	-	16/07/2020	16/07/2020	16/07/2020
Lead in Swabs	µg/swab	3	7	<1

Client Reference: T01035

Method ID	Methodology Summary
Metals-020/021/022	Digestion of Dust wipes/swabs and /or miscellaneous samples for Metals determination by ICP-AES/MS and/or CV-AAS

Client Reference: T01035

QUALITY CONTROL: Lead in swab						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			16/07/2020					16/07/2020	
Date analysed	-			16/07/2020					16/07/2020	
Lead in Swabs	µg/swab	1	Metals-020/021/022	<1					103	

Client Reference: T01035

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
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Client Reference: T01035

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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

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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.

From: [REDACTED]
To: [Watson, Geoffrey](#)
Cc: [Flynn, Charlie](#); [REDACTED]
Subject: Yarralumla Primary School - Montesorri School - Classroom Tracker Location 014
Date: Wednesday, 22 July 2020 2:33:44 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Good afternoon Geoffrey,

My apologies for the late email.

The results of the clearance swabs taken from one of the desk in Classroom Tracker location 014 in the Montesorri School is 0.2mg/m2 which is above the acceptance clearance level of 0.11.

Due to the low amount of lead dust remnants on the desk and the young children have only been in the classroom for 2 days, we determine that the potential health risk from exposure to lead dust particulate would be relatively low in this case, due to the level detected and the period of time that any one child would have been exposed.

It should be noted that there are other areas in the Montesorri school and Preschool that returned a higher results but the classrooms were not reoccupied and has since been environmental clean so there should not be any exposure risk concerns.

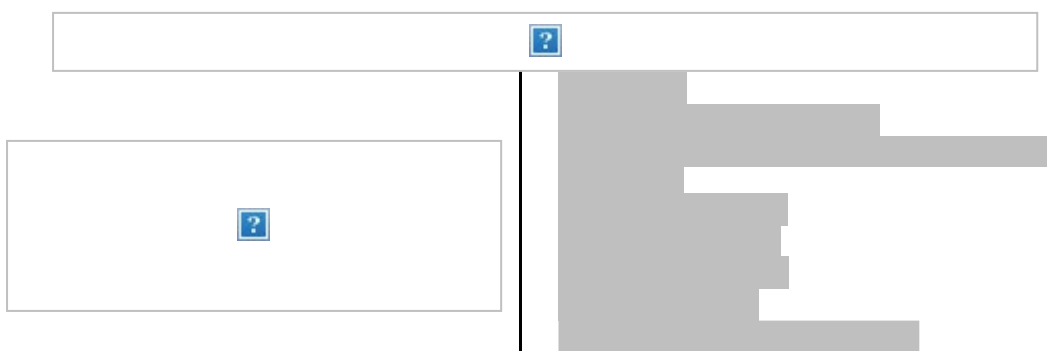
We have sent off the clearance swabs taken last night today and we should have the results tomorrow.

If I can be of any further assistance please don't hesitate to contact me.

Thank you.

Kind regards,

[REDACTED]



Web: www.robsonenviro.com.au

140 Gladstone St Fyshwick ACT 2609 ~ PO Box 112 Fyshwick ACT 2609

Best Practice Certification for AS/NZS ISO 9001:2008 - Quality ~ ISO 14001:2004 - OHS ~ AS/NZS 4801:2001 - Environment

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