

## Certificate of Analysis

**Wentworth Shire Council**  
**26-28 Adelaide St**  
**Wentworth**  
**NSW 2648**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
 The results of the tests, calibrations and/or  
 measurements included in this document are traceable  
 to Australian/national standards.

**Report** **619689-W**  
 Project name **BURONGA LANDFILL**  
 Received Date **Sep 26, 2018**

			BH2	BH3	BH4
<b>Client Sample ID</b>			<b>Water</b>	<b>Water</b>	<b>Water</b>
<b>Sample Matrix</b>			<b>S18-Se34716</b>	<b>S18-Se34717</b>	<b>S18-Se34718</b>
<b>Eurofins   mgt Sample No.</b>			<b>Sep 25, 2018</b>	<b>Sep 25, 2018</b>	<b>Sep 25, 2018</b>
<b>Date Sampled</b>					
Test/Reference	LOR	Unit			
Conductivity (at 25°C)	1	uS/cm	60000	52000	43000
pH (at 25°C)	0.1	pH Units	7.3	5.7	3.9

**Sample History**

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

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

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Conductivity (at 25°C) - Method:	Melbourne	Sep 27, 2018	28 Day
pH (at 25°C) - Method: LTM-GEN-7090 pH in water by ISE	Melbourne	Sep 27, 2018	0 Hours

<b>Company Name:</b> Wentworth Shire Council	<b>Order No.:</b>	<b>Received:</b> Sep 26, 2018 1:23 PM
<b>Address:</b> 26-28 Adelaide St Wentworth NSW 2648	<b>Report #:</b> 619689	<b>Due:</b> Oct 4, 2018
<b>Project Name:</b> BURONGA LANDFILL	<b>Phone:</b> 03 5027 5027	<b>Priority:</b> 5 Day
	<b>Fax:</b> 03 5027 5000	<b>Contact Name:</b> Don McKinnon
<b>Eurofins   mgt Analytical Services Manager : Andrew Black</b>		

Sample Detail						Conductivity (at 25°C)	pH (at 25°C)
<b>Melbourne Laboratory - NATA Site # 1254 &amp; 14271</b>						X	X
<b>Sydney Laboratory - NATA Site # 18217</b>							
<b>Brisbane Laboratory - NATA Site # 20794</b>							
<b>Perth Laboratory - NATA Site # 23736</b>							
<b>External Laboratory</b>							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	BH2	Sep 25, 2018		Water	S18-Se34716	X	X
2	BH3	Sep 25, 2018		Water	S18-Se34717	X	X
3	BH4	Sep 25, 2018		Water	S18-Se34718	X	X
<b>Test Counts</b>						3	3

## Internal Quality Control Review and Glossary

### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- All soil results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- This report replaces any interim results previously issued.

### Holding Times

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

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

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

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

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

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

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>ug/L:</b> micrograms per litre
<b>ppm:</b> Parts per million	<b>ppb:</b> Parts per billion	<b>%:</b> Percentage
<b>org/100mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>LOR</b>	Limit of Reporting.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>CRM</b>	Certified Reference Material - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>USEPA</b>	United States Environmental Protection Agency
<b>APHA</b>	American Public Health Association
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>COC</b>	Chain of Custody
<b>SRA</b>	Sample Receipt Advice
<b>QSM</b>	Quality Systems Manual ver 5.1 US Department of Defense
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>TEQ</b>	Toxic Equivalency Quotient

### QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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

### QC Data General Comments

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

**Quality Control Results**

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
Conductivity (at 25°C)	S18-Se34716	CP	uS/cm	60000	59000	1.0	30%	Pass	
pH (at 25°C)	S18-Se34716	CP	pH Units	7.3	7.3	pass	30%	Pass	

**Comments**
**Sample Integrity**

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

**Authorised By**

Andrew Black	Analytical Services Manager
Julie Kay	Senior Analyst-Inorganic (VIC)


**Glenn Jackson**
**National Operations Manager**

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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