



CERTIFICATE OF ANALYSIS

Work Order	: EW1511429	Page	: 1 of 4
Client	: WOLLONGONG CITY COUNCIL	Laboratory	: Environmental Division NSW South Coast
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Project	: Whytes Gully Storm Water Overflow	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 3044522	Date Samples Received	: 25-Aug-2015 16:05
C-O-C number	: ----	Date Analysis Commenced	: 25-Aug-2015
Sampler	: Craig Wilson	Issue Date	: 01-Sep-2015 16:55
Site	: ----		
Quote number	: ----	No. of samples received	: 3
		No. of samples analysed	: 3

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Ashesh Patel	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

∅ = ALS is not NATA accredited for these tests.

- Sampling and sample data supplied by ALS Wollongong.
- Sampling completed as per FWI-EN002 Surface Water Sampling.
- Field tests completed on day of sampling/receipt.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Point 1 (Point 1)	Point 4 (Point 33)	Point 6 (Point 34)	----	----
Client sampling date / time				25-Aug-2015 15:05	25-Aug-2015 14:45	25-Aug-2015 15:15	----	----	
Compound	CAS Number	LOR	Unit	EW1511429-001	EW1511429-002	EW1511429-003	-----	-----	
				Result	Result	Result	Result	Result	
EA005FD: Field pH									
pH	----	0.1	pH Unit	8.2	7.8	7.7	----	----	
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm	508	224	171	----	----	
EA025: Suspended Solids									
[^] Suspended Solids (SS)	----	5	mg/L	116	47	46	----	----	
EA116: Temperature									
Temperature	----	0.1	°C	13.7	13.3	12.6	----	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO ₃	DMO-210-001	1	mg/L	<1	<1	<1	----	----	
Carbonate Alkalinity as CaCO ₃	3812-32-6	1	mg/L	<1	<1	<1	----	----	
Bicarbonate Alkalinity as CaCO ₃	71-52-3	1	mg/L	129	41	34	----	----	
Total Alkalinity as CaCO ₃	----	1	mg/L	129	41	34	----	----	
ED041G: Sulfate (Turbidimetric) as SO₄ 2- by DA									
Sulfate as SO ₄ - Turbidimetric	14808-79-8	1	mg/L	20	11	12	----	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	37	16	14	----	----	
ED093T: Total Major Cations									
Calcium	7440-70-2	1	mg/L	24	11	11	----	----	
Magnesium	7439-95-4	1	mg/L	14	6	5	----	----	
Sodium	7440-23-5	1	mg/L	58	19	15	----	----	
Potassium	7440-09-7	1	mg/L	12	5	3	----	----	
EG020F: Dissolved Metals by ICP-MS									
Iron	7439-89-6	0.05	mg/L	0.19	0.50	0.57	----	----	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.3	0.1	0.1	----	----	
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L	1.92	0.26	0.03	----	----	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L	0.27	0.04	<0.01	----	----	
EK058G: Nitrate as N by Discrete Analyser									
[^] Nitrate as N	14797-55-8	0.01	mg/L	2.62	1.33	1.15	----	----	
EK059G: Nitrite plus Nitrate as N (NO_x) by Discrete Analyser									



Analytical Results

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Compound	CAS Number	LOR	Unit		EW1511429-001	EW1511429-002	EW1511429-003	-----	-----
					Result	Result	Result	Result	Result
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L		2.89	1.37	1.15	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		12	8	7	----	----
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L		9.46	9.69	11.0	----	----
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		<0.05	<0.05	<0.05	----	----