CERTIFICATE OF ANALYSIS

Work Order	: **EW1602133**	Page	: 1 of 4
Client	: **WOLLONGONG CITY COUNCIL**	Laboratory	: Environmental Division NSW South Coast
Contact	: MR WAYDE PETERSON	Contact	: Glenn Davies
Address	: 41 BURELLI STREET WOLLONGONG NSW, AUSTRALIA 2500	Address	: 1/19 Ralph Black Dr, North Wollongong 2500 4/13 Geary Pl, North Nowra 2541 Australia
Telephone	: +61 02 4227 7111	Telephone	: 02 42253125
Project	: Whytes Gully Storm Water Overflow	Date Samples Received	: 03-Jun-2016 16:10
Order number	: 3044522	Date Analysis Commenced	: 03-Jun-2016
C-O-C number	: ----	Issue Date	: 10-Jun-2016 11:38
Sampler	: Craig Wilson, Robert DaLio		
Site	: ----		
Quote number	: ----		
No. of samples received	: 3		
No. of samples analysed	: 3		

NATA Accredited Laboratory 825
Accredited for compliance with
ISO/IEC 17025.

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

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Kristy Boje	Laboratory Supervisor	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.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Field data supplied by ALS Wollongong.
- 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	03-Jun-2016 14:05	03-Jun-2016 13:40	03-Jun-2016 13:55	----	----
Compound	CAS Number	LOR	Unit	EW1602133-001	EW1602133-002	EW1602133-003	--------	--------
				Result	Result	Result	----	----
EA005FD: Field pH								
pH	----	0.1	pH Unit	7.9	6.4	7.6	----	----
EA010FD: Field Conductivity								
Electrical Conductivity (Non Compensated)	----	1	µS/cm	1160	405	633	----	----
EA025: Suspended Solids								
Suspended Solids (SS)	----	5	mg/L	7	12	24	----	----
EA116: Temperature								
Temperature	----	0.1	°C	14.4	14.5	15.0	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	278	72	214	----	----
Total Alkalinity as CaCO3	----	1	mg/L	278	72	214	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	42	47	38	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	175	42	51	----	----
ED093T: Total Major Cations								
Calcium	7440-70-2	1	mg/L	35	20	52	----	----
Magnesium	7439-95-4	1	mg/L	27	11	24	----	----
Sodium	7440-23-5	1	mg/L	150	37	39	----	----
Potassium	7440-09-7	1	mg/L	18	6	3	----	----
EG020F: Dissolved Metals by ICP-MS								
Iron	7439-89-6	0.05	mg/L	<0.05	0.22	0.07	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	0.5	0.1	0.2	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.02	0.01	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.35	0.03	0.05	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								

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	03-Jun-2016 14:05	03-Jun-2016 13:40	03-Jun-2016 13:55	----	----
Compound	CAS Number	LOR	Unit		EW1602133-001	EW1602133-002	EW1602133-003	--------	--------
					Result	Result	Result	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.35**	**0.03**	**0.05**	**----**	**----**
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**14**	**6**	**4**	**----**	**----**
EP025FD: Field Dissolved Oxygen									
Dissolved Oxygen	----	0.01	mg/L		**9.59**	**5.29**	**8.14**	**----**	**----**
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		<0.05	<0.05	<0.05	**----**	**----**