Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EW1302330**	Page	: 1 of 4
Client	: **WOLLONGONG CITY COUNCIL**	Laboratory	: Environmental Division NSW South Coast
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Project	: Whytes Gully Stormwater Annual Overflow	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: 3015425		
C-O-C number	: ----	Date Samples Received	: 13-AUG-2013
Sampler	: Craig Wilson	Issue Date	: 23-AUG-2013
Site	: ----		
		No. of samples received	: 1
Quote number	: WL/001/11 Whytes Gully Stormwater	No. of samples analysed	: 1

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

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.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong
Hoa Nguyen	Senior Inorganic Chemist	Sydney Inorganics

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

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Stormwater	----	----	----	----
				Client sampling date / time	13-AUG-2013 11:55	----	----	----	----
Compound	CAS Number	LOR	Unit		EW1302330-001	----	----	----	----
EA025: Suspended Solids									
Suspended Solids (SS)	----	5	mg/L		23	----	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		8	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		563	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		570	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		14	----	----	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		189	----	----	----	----
ED093T: Total Major Cations									
Calcium	7440-70-2	1	mg/L		49	----	----	----	----
Magnesium	7439-95-4	1	mg/L		36	----	----	----	----
Sodium	7440-23-5	1	mg/L		187	----	----	----	----
Potassium	7440-09-7	1	mg/L		50	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Iron	7439-89-6	0.05	mg/L		0.67	----	----	----	----
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L		0.4	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		41.7	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	----	0.01	mg/L		0.34	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.19	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		0.53	----	----	----	----
EN67 PK: Field Tests									
pH	----	0.1	pH Unit		8.4	----	----	----	----
Electrical Conductivity (Non Compensated)	----	1	µS/cm		1670	----	----	----	----
Dissolved Oxygen	----	0.01	mg/L		8.82	----	----	----	----
Temperature	----	0.1	°C		15.3	----	----	----	----

Analytical Results

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				Client sampling date / time	13-AUG-2013 11:55	----	----	----	----
Compound	CAS Number	LOR	Unit		EW1302330-001	----	----	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		**71**	----	----	----	----
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		<0.05	----	----	----	----