

CERTIFICATE OF ANALYSIS

Work Order : EM2104707

: Dept for Environment & Water

Contact : Mr FRANK MANGERUCA

Address : GPO BOX 2834

ADELAIDE SA, AUSTRALIA 5001

Telephone : ---Project : HCHB
Order number : ----

Client

C-O-C number · ----

Sampler : JOSHUA CASTLE

Site : ---

Quote number ; AD/052/20 V2

No. of samples received : 20
No. of samples analysed : 20

Page : 1 of 10

Laboratory : Environmental Division Melbourne

Contact : Kieren Burns

Address : 4 Westall Rd Springvale VIC Australia 3171

Telephone : +61881625130

Date Samples Received : 19-Mar-2021 11:15

Date Analysis Commenced : 19-Mar-2021

Issue Date 26-Mar-2021 16:02

Accreditation Category



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

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

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.

Ankit Joshi Inorganic Chemist Sydney Inorganics, Smithfield, NSW
Arenie Vijayaratnam Non-Metals Team Leader Melbourne Inorganics, Springvale, VIC
Dilani Fernando Senior Inorganic Chemist Melbourne Inorganics, Springvale, VIC
Samantha Smith Laboratory Coordinator WRG Subcontracting, Springvale, VIC

Position

Page : 2 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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.

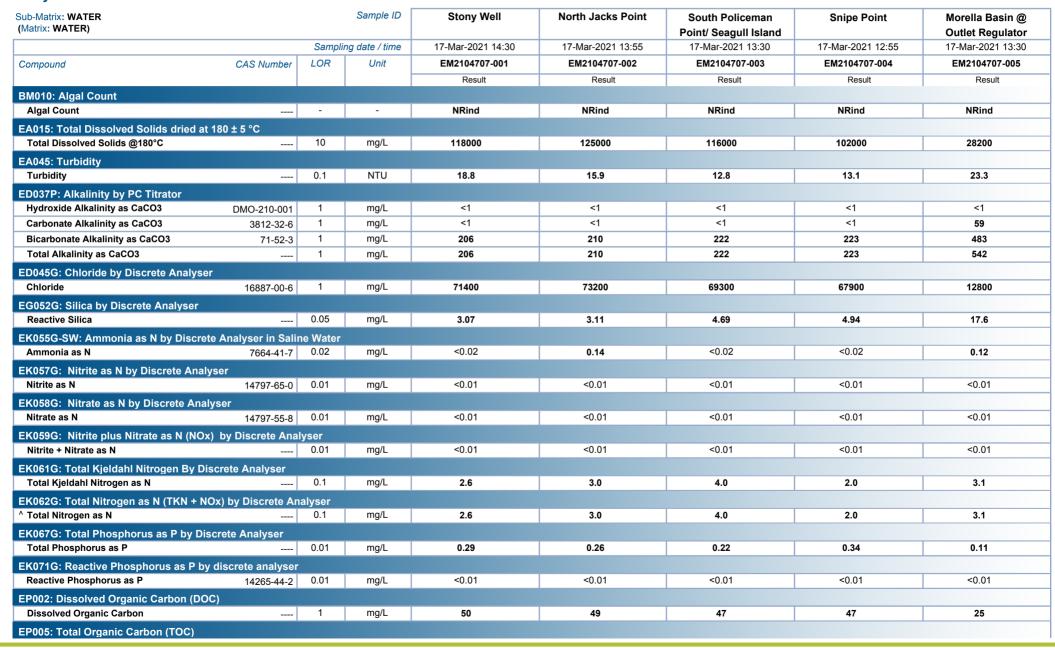
LOR = Limit of reporting

- ^ = 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.
- EP008, Chlorophyll-a standard does not contained Pheophytin-a standard. (LOR raised for Chlorophyll-b and Pheophytin a due to sample matrix.)
- EA015H: EM2104707 #2-3, #9, #12, #19: TDS by method EA-015 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- EP005:EP002: EM2104707 #5 It has been noted that dissolved organic carbon is greater than total organic carbon, however this difference is within the limits of experimental variation.
- ED045G: The presence of thiocyanate can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.
- EK055G-SW: EM2104707 #2 Poor matrix spike recovery for Ammonia as N(Saline water) due to matrix effects.
- NRind Reported in separate COA
- Algal Count (BM010) has been performed by ALS Water Resources Group, NATA Accreditation no. 992, Site no. 989.

Page : 3 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB

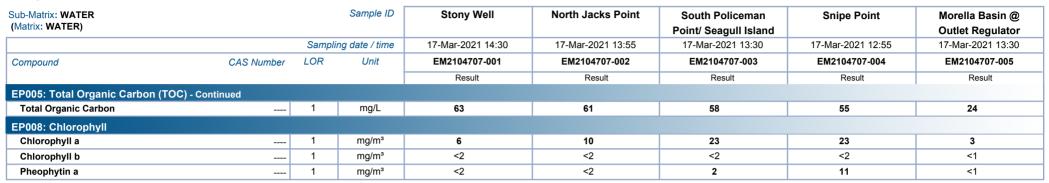




Page : 4 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB

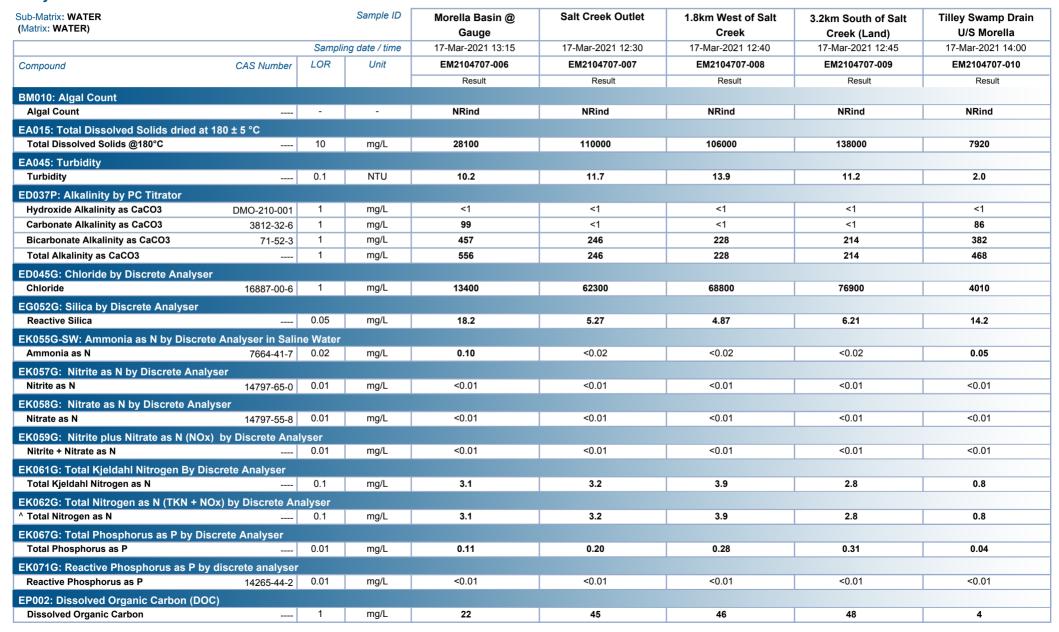




Page : 5 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB

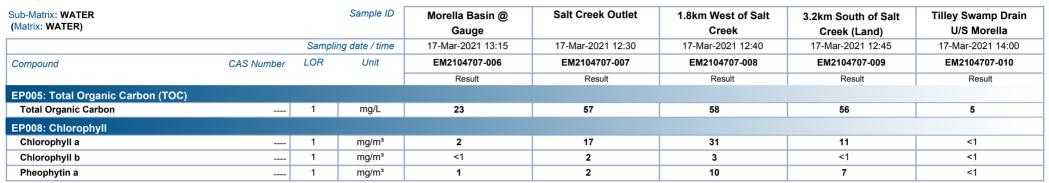




Page : 6 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCH

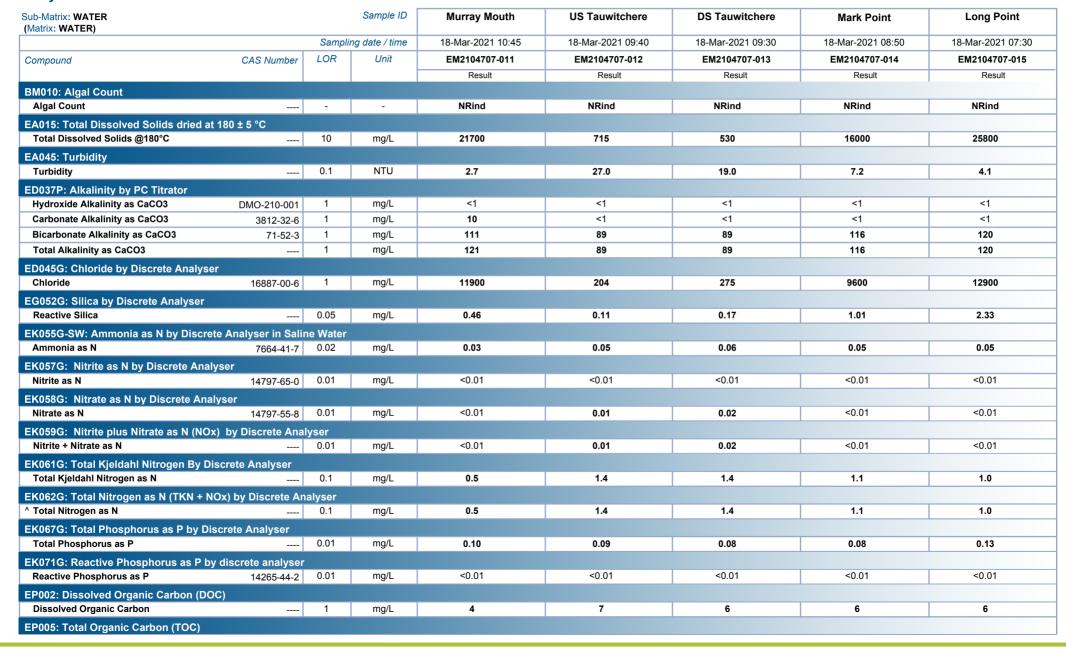




Page : 7 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB

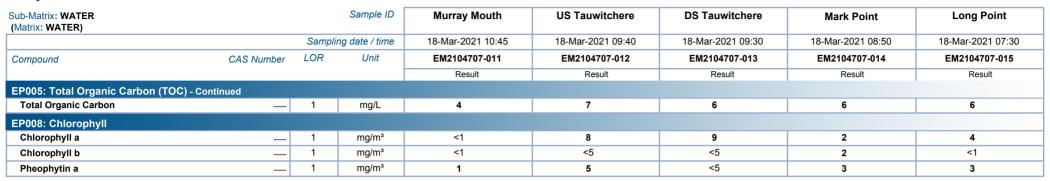




Page : 8 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB

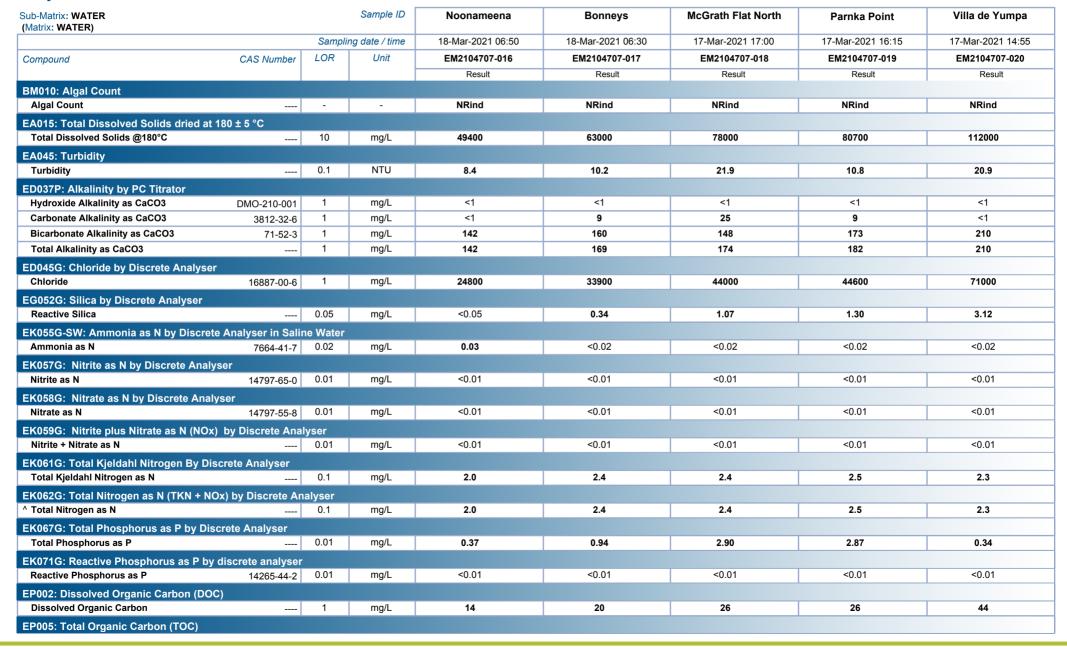




Page : 9 of 10 Work Order : EM2104707

Client : Dept for Environment & Water

Project : HCHB





Page : 10 of 10 : EM2104707 Work Order

: Dept for Environment & Water : HCHB Client

Project

Analytical Results



Sub-Matrix: WATER (Matrix: WATER)			Sample ID	Noonameena	Bonneys	McGrath Flat North	Parnka Point	Villa de Yumpa
		Samplii	ng date / time	18-Mar-2021 06:50	18-Mar-2021 06:30	17-Mar-2021 17:00	17-Mar-2021 16:15	17-Mar-2021 14:55
Compound	CAS Number	LOR	Unit	EM2104707-016	EM2104707-017	EM2104707-018	EM2104707-019	EM2104707-020
				Result	Result	Result	Result	Result
EP005: Total Organic Carbon (TOC)	- Continued							
Total Organic Carbon		1	mg/L	15	22	30	29	54
EP008: Chlorophyll								
Chlorophyll a		1	mg/m³	6	7	9	7	8
Chlorophyll b		1	mg/m³	<1	<1	<1	<1	<1
Pheophytin a		1	mg/m³	2	4	2	<1	<1

Inter-Laboratory Testing
Analysis conducted by ALS Sydney, NATA accreditation no. 825, site no. 10911 (Chemistry) 14913 (Biology).

(WATER) EP008: Chlorophyll