

# **CERTIFICATE OF ANALYSIS**

Work Order : EM2111820

Client : Dept for Environment & Water

Contact : Mr FRANK MANGERUCA

Address : GPO BOX 2834

ADELAIDE SA, AUSTRALIA 5001

Telephone : ---Project : HCHB

Order number : ----

C-O-C number : ---Sampler : DM
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 : 23-Jun-2021 10:40

Date Analysis Commenced : 23-Jun-2021

Issue Date : 30-Jun-2021 15:09



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

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
Dilani Fernando Senior Inorganic Chemist Melbourne Inorganics, Springvale, VIC
Kim McCabe Townsville Inorganics, Townsville, QLD

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#### **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.

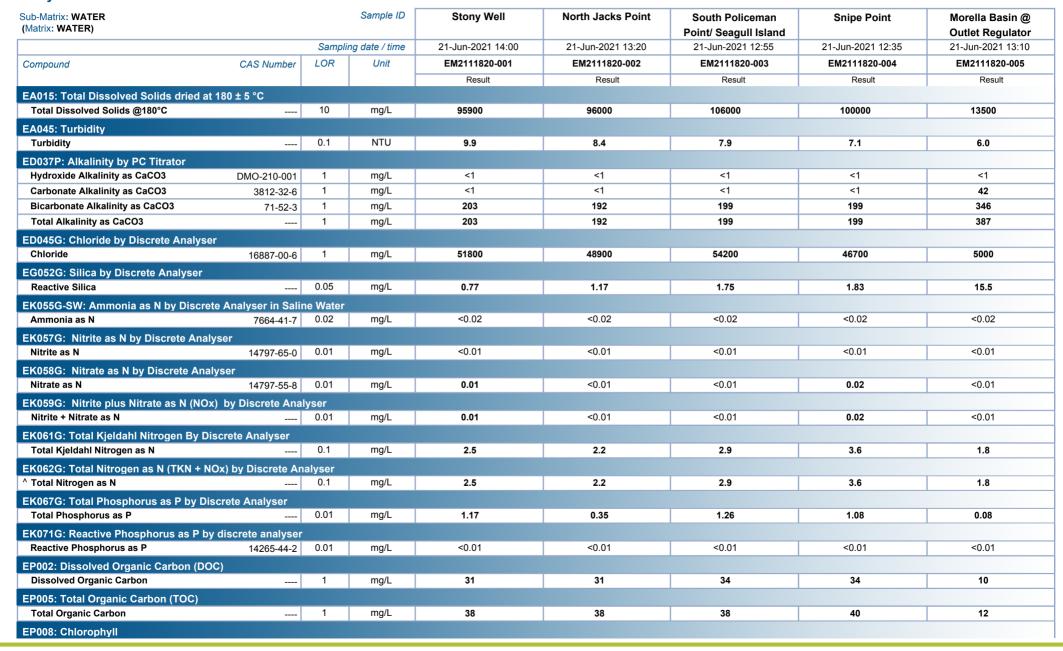
LOR = Limit of reporting

- ^ = 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.
- EP002,EP005: EM2111820: It is recognised that total organic carbon is less than dissolved organic carbon for sample #15. However, the difference is within experimental variation of the methods.
- It is recognised that TOC is less than DOC for sample #15. However, the difference is within experimental variation of the methods.
- EP008, LOR raised for Chlorophyll-b due to sample matrix.
- EP008, Chlorophyll-a standard does not contained Pheophytin-a standard.
- Sample 1-5,7-9,16-20; 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.
- EK061G: EM2111820 #12, Poor duplicate precision for TKN due to sample heterogeneity. Confirmed by re-extraction and re-analysis.
- EK057G: EM2111820-002 Poor matrix spike recovery for Nitrite as N due to matrix effects.
- NRind Reported in separate COA
- Total Algae Count (MB010) is conducted by ALS Scoresby NATA accreditation no. 992, site no. 989.

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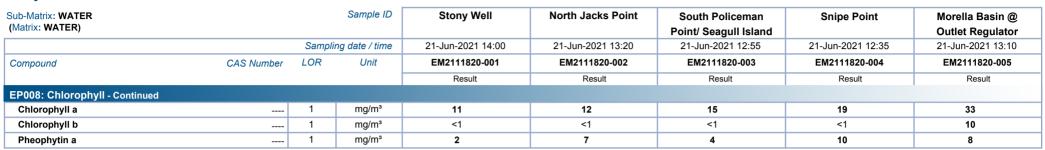




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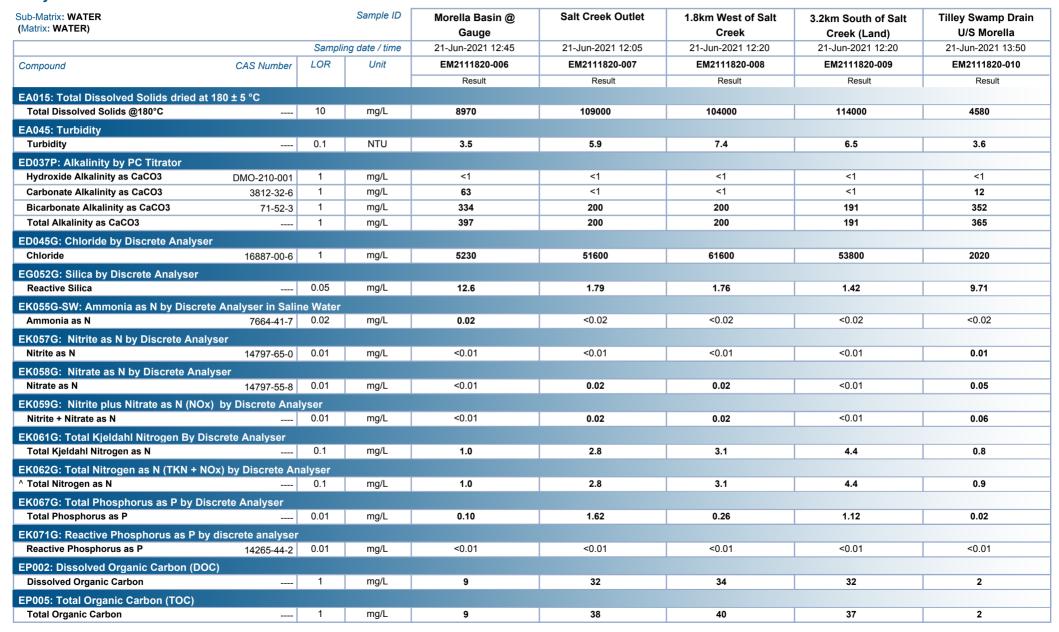




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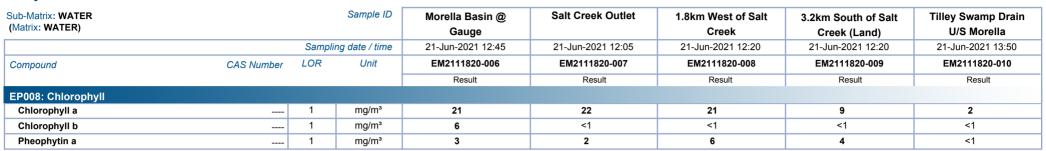




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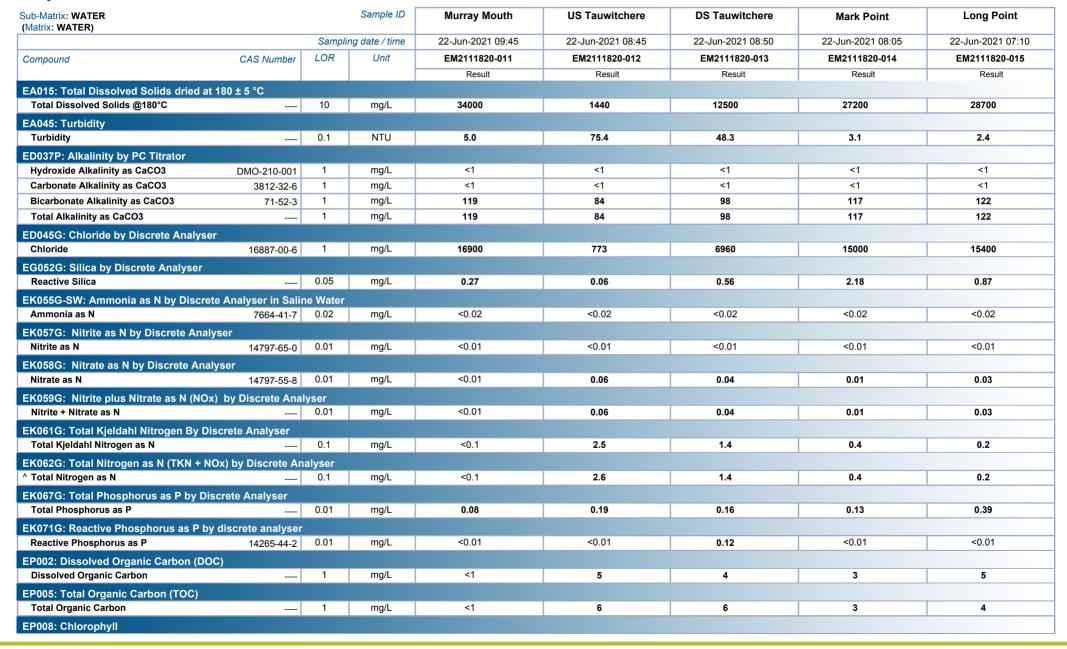




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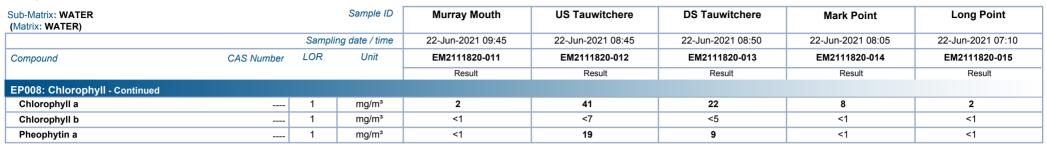




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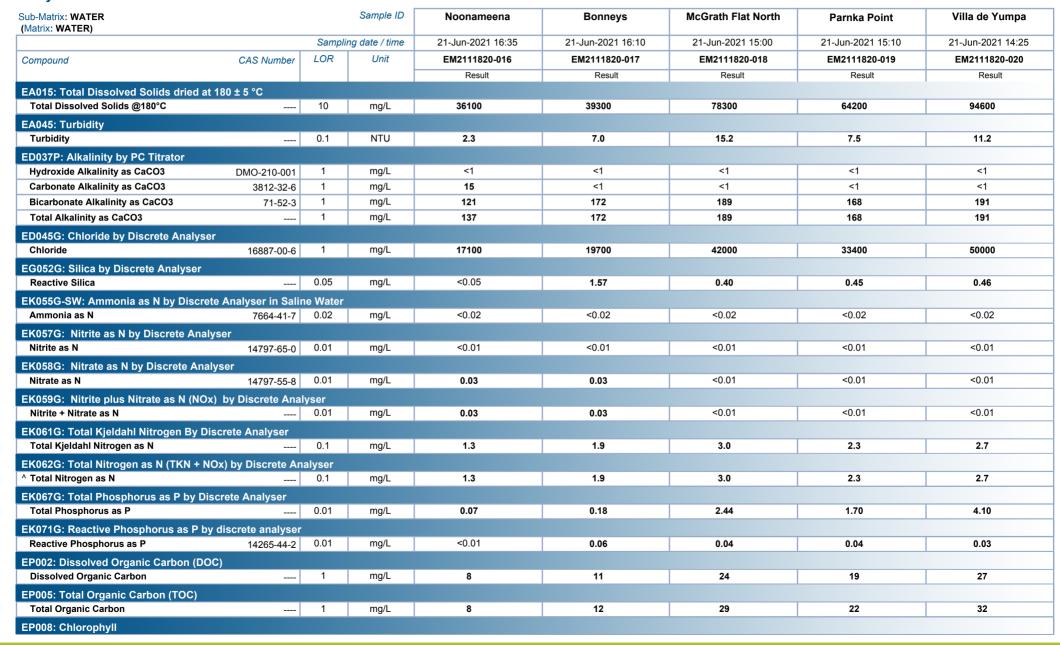




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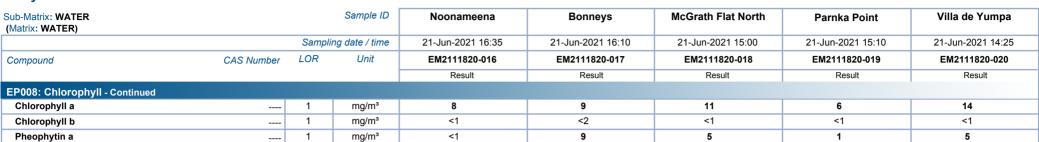


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## Analytical Results



### Inter-Laboratory Testing

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

(WATER) EP008: Chlorophyll

Analysis conducted by ALS Townsville, NATA accreditation no. 825, site no. 23472 (Chemistry) 23313 (Biology).

(WATER) ED037P: Alkalinity by PC Titrator

