



WATER ANALYSIS REPORT

Report Number: 3275.27.WATR
Report Date: 30 August 2021

1. CLIENT DETAILS

Client Contact: Chris McLaughlin
Client Company: McLaughlin Engineering Pty Ltd
Client Address: PO Box 3001
UMINA NSW 2257

2. SAMPLING DETAILS

Sample Address: GRA Site – Site Pit*
Sampling Date: 25 August 2021*
Date Sample Received: 25 August 2021
Sampled By: Chris McLaughlin*
*As advised by Client Contact.

3. SCOPE

GETEX PTY LTD (Getex) was requested by Chris McLaughlin of McLaughlin Engineering Pty Ltd to analyse one sample of water, as delivered to Getex, for pH, colour, suspended solids and oil and grease.

It is the understanding of Getex that the water sampled was reported to be from water stored in a sedimentation pond which is proposed to be discharged to stormwater and ultimately into a marine environment. It is understood that the NSW Environmental Protection Authority (NSW EPA) has imposed conditions within Environment Protection Licence 11906 that require the sedimentation pond water to be analysed for the above water quality parameters prior to its discharge to stormwater. As such, the objectives of the analysis were to compare the analytical results with this imposed requirement.

GETEX PTY LIMITED

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4. METHOD

Sample 3275/27 was analysed by Envirolab Services Pty Ltd (ELS) (NATA accreditation no. 2901) for the following:

- pH (ELS Method Inorg-001)
- Colour (true) (ELS Method Inorg-028)
- Oil and grease (ELS Method Inorg-003)
- Suspended solids (ELS Method Inorg-019)

5. REFERENCE CRITERIA

Values in the table below have been extracted from the Environment Protection Licence 11906 and Australian Drinking Water Guidelines 2011. In the absence of a guideline value in the Environmental Protection Licence for colour, the aesthetic guideline level of <15 has been adopted from the Australian Drinking Water Guidelines.

Reference Criteria			
Colour Hazen Units	Total Suspended Solids (mg/L)	Oil and Grease (mg/L)	pH
< 15 [^]	50	10	6.5 – 8.5

[^] Australian Drinking Water Guidelines 2011

6. RESULTS

Refer to Appendix I for the Laboratory Analysis Report.

Sample No.	Analysis Results			
	Colour Hazen Units	Total Suspended Solids (mg/L)	Oil and Grease (mg/L)	pH
3275/27	7	<5	<5	8.1

7. DISCUSSION

Based on a comparison of the analysis results against the reference criteria it is the opinion of the consultant that the water representative of the sample analysed is satisfactory with respect to the reference criteria noted in Section 5 and in consideration of the objectives of this assessment.

It is noted that discharges to stormwater are controlled by a variety of authorities, with the particular authority which holds control being dependent upon the locality and particular stormwater system in question. Furthermore, different controlling authorities impose different contaminant testing and criteria regulations which also vary depending on the particular location and system under their jurisdiction.

As such, the water quality analysis results presented in this report should be forwarded to the relevant stormwater authority and/or the NSW EPA in application to obtain approval to discharge sedimentation pond water pertaining to the samples analysed in this report. Only after all applicable approvals have been received can any discharge to stormwater be conducted.

8. LIMITATIONS

Getex and its staff members are professionally qualified and trained to achieve a suitable level of competency for the tasks undertaken.

Although all work is performed to a professional and diligent standard, the potential variance between the practical limitations of the scope of work undertaken, the cost of our services, all possible issues of concern, and any loss or damages which may be associated with our work are such that we cannot warrant that all issues of concern/contaminants have been identified. We therefore limit any potential liability associated with our work to the cost of our services.

All work conducted and/or reports/information produced by Getex are prepared for a specific objective and within a specified scope of work as agreed between the Client and Getex. As such this document is only for the use of the Client for the intended objective and may not be suitable for any other purpose. No parties other than the client may use this document without first conferring with Getex. Before passing onto a third party this document, the third party must be informed by the client of any relevant information relating to this document. It is the responsibility of any party using this report to check fully to their satisfaction if this report is suitable for their intended use.

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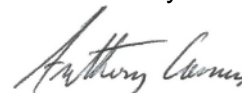
The samples were analysed as received by the laboratory and Getex cannot guarantee the accuracy/quality, suitability or representativeness of the sample collection and any results or conclusions affected by the sample collection.

Kind Regards,

Justin Thompson-Laing BSc (Hons),
CEnvP (SC)
Environment Manager



Reviewed by:



Anthony Camus BE
(Chem) (Hons)
General Manager



APPENDIX I

LABORATORY ANALYSIS REPORT



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CERTIFICATE OF ANALYSIS 276595

Client Details

Client	Getex Pty Ltd
Attention	Justin Thompson-Laing
Address	Unit 2, Building B, 64 Talavera Road, MACQUARIE PARK, NSW, 2113

Sample Details

Your Reference	<u>3275</u>
Number of Samples	1 water
Date samples received	26/08/2021
Date completed instructions received	26/08/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	30/08/2021
Date of Issue	30/08/2021
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Diego Bigolin, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 276595
Revision No: R00



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Client Reference: 3275

Miscellaneous Inorganics		
Our Reference		276595-1
Your Reference	UNITS	3275/27
Type of sample		water
Date prepared	-	26/08/2021
Date analysed	-	26/08/2021
pH	pH Units	8.1
Total Suspended Solids	mg/L	<5
Oil & Grease (LLE)	mg/L	<5
Colour (True)	Pt/Co	7

Client Reference: 3275

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-003	Oil & Grease - determine gravimetrically following extraction with Hexane, in accordance with APHA latest edition, 5520-B.
Inorg-019	Suspended Solids - determined gravimetrically by filtration of the sample. The samples are dried at 104+/-5°C.
Inorg-028	Colour - measured by visual comparison and/or spectrophotometrically.

Client Reference: 3275

QUALITY CONTROL: Miscellaneous Inorganics				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			26/08/2021	[NT]	[NT]	[NT]	[NT]	26/08/2021	[NT]
Date analysed	-			26/08/2021	[NT]	[NT]	[NT]	[NT]	26/08/2021	[NT]
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Oil & Grease (LLE)	mg/L	5	Inorg-003	<5	[NT]	[NT]	[NT]	[NT]	87	[NT]
Colour (True)	Pt/Co	5	Inorg-028	<5	[NT]	[NT]	[NT]	[NT]	106	[NT]

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.



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SAMPLE RECEIPT ADVICE

Client Details	
Client	Getex Pty Ltd
Attention	Justin Thompson-Laing

Sample Login Details	
Your reference	3275
Envirolab Reference	276595
Date Sample Received	26/08/2021
Date Instructions Received	26/08/2021
Date Results Expected to be Reported	30/08/2021

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 water
Turnaround Time Requested	2 days
Temperature on Receipt (°C)	5
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments	
Nil	

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



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Sample ID	pH	Total Suspended Solids	Oil & Grease (LLE)	Colour (True)
3275/27	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info
Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

