



Environmental Forensics Report of Analysis
Project 20230389

Report #: 1911
Date Issued: 06-Oct-2023
Page 1 of 5

Client Project Reference: Menindee Darling Barka River Healt

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 06 October 2023

Project Received: 15 September 2023

EF Project Contact: [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
238587	MFK-Z-E11	Liquid	14/09/2023 12:00PM	
238592	MFK-Z-E11	Liquid	14/09/2023 12:00PM	Field Aliquot
238597	MFK-Z-E11	Liquid	14/09/2023 12:00PM	Field Aliquot
238588	MFK-Z-E12	Liquid	14/09/2023 12:00PM	
238593	MFK-Z-E12	Liquid	14/09/2023 12:00PM	Field Aliquot
238598	MFK-Z-E12	Liquid	14/09/2023 12:00PM	Field Aliquot
238589	MFK-Z-E13	Liquid	14/09/2023 12:00PM	
238594	MFK-Z-E13	Liquid	14/09/2023 12:00PM	Field Aliquot
238599	MFK-Z-E13	Liquid	14/09/2023 12:00PM	Field Aliquot
238590	MFK-Z-E14	Liquid	14/09/2023 12:00PM	
238595	MFK-Z-E14	Liquid	14/09/2023 12:00PM	Field Aliquot
238600	MFK-Z-E14	Liquid	14/09/2023 12:00PM	Field Aliquot
238591	MFK-Z-E15	Liquid	14/09/2023 12:00PM	
238596	MFK-Z-E15	Liquid	14/09/2023 12:00PM	Field Aliquot
238601	MFK-Z-E15	Liquid	14/09/2023 12:00PM	Field Aliquot
238602	MFK-Z-E11 Filtered 1	Liquid	14/09/2023 12:00PM	
238603	MFK-Z-E12 Filtered 1	Liquid	14/09/2023 12:00PM	
238604	MFK-Z-E13 Filtered 1	Liquid	14/09/2023 12:00PM	
238605	MFK-Z-E14 Filtered 1	Liquid	14/09/2023 12:00PM	
238606	MFK-Z-E15 Filtered 1	Liquid	14/09/2023 12:00PM	
238607	MFK-Z-E11 Filtered 2	Liquid	14/09/2023	
238608	MFK-Z-E12 Filtered 2	Liquid	14/09/2023	
238609	MFK-Z-E13 Filtered 2	Liquid	14/09/2023	
238610	MFK-Z-E14 Filtered 2	Liquid	14/09/2023	
238611	MFK-Z-E15 Filtered 2	Liquid	14/09/2023	
238612	MFK-Z-E11 Unfiltered	Liquid	14/09/2023	
238613	MFK-Z-E12 Unfiltered	Liquid	14/09/2023	
238614	MFK-Z-E13 Unfiltered	Liquid	14/09/2023	
238615	MFK-Z-E14 Unfiltered	Liquid	14/09/2023	

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



238616 MFK-Z-E15 Unfiltered Liquid 14/09/2023

Report Notes

- This document has been authorised by the person whose name appears in this report.
- This report shall not be reproduced except in full. Samples analysed as received from the client.
- Results reported as 'less than' (<) indicates a result below the practical quantitation limit for the sample matrix and method used.

Project Comments

· Samples 238587 to 238591 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EA025: Total Suspended Solids dried at $104 \pm 2^\circ\text{C}$ and EA036: Fixed/Volatile Suspended Solids.

Samples 238602 to 238616 were also sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of Nutrients: EK055G: Ammonia as N by Discrete Analyser, EK059G: Nitrite plus Nitrate as N (NO_x) by Discrete Analyser, EK061F: Filtered Total Kjeldahl Nitrogen as N (TKN), EK061G: Total Kjeldahl Nitrogen By Discrete Analyser, EK062F: Filtered Total Nitrogen as N, EK062G: Total Nitrogen as N (TKN + NO_x) by Discrete Analyser, EK067FG: Filtered Total Phosphorus as P by Discrete Analyser, EK067G: Total Phosphorus as P by Discrete Analyser, and EK071G: Reactive Phosphorus as P by Discrete Analyser.

This report summarises data from the attached external report: ES2331833, dated 25-Sep-2023.

· Samples 238597 to 238601 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Blue-Green Algal ID and Enumeration. Please see detailed results in the attached Phytoplankton Analysis Report no. 291999 dated 4-Oct-2023.

Samples 238592 to 238596 were also sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Algal Toxins. Please see the attached Analytical Report No: 291999 dated 4-Oct-2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.



Analysis Results - External Methods*

Area - EXTERNAL

	Sample ID	238592	238597	238593	238598	238594	238599	238595	238600	238596	238601
	Start Date	22/09/2023	3/10/2023	22/09/2023	3/10/2023	22/09/2023	3/10/2023	22/09/2023	3/10/2023	22/09/2023	3/10/2023
	Client ID	MFK-Z-E11	MFK-Z-E11	MFK-Z-E12	MFK-Z-E12	MFK-Z-E13	MFK-Z-E13	MFK-Z-E14	MFK-Z-E14	MFK-Z-E15	MFK-Z-E15
Analyte											
Algal Enumeration	-		RC		RC		RC		RC		RC
Algal Identification	-		RC		RC		RC		RC		RC
Algal Toxins	-	RC		RC		RC		RC		RC	
Saxitoxins and PST	-	RC		RC		RC		RC		RC	

Analysis Results - External Methods*

Area - EXTERNAL

	Sample ID	238602	238603	238604	238605	238606	238607	238608	238609	238610	238611	238612	238613
	Start Date	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023
	Client ID	MFK-Z-E11	MFK-Z-E12	MFK-Z-E13	MFK-Z-E14	MFK-Z-E15	MFK-Z-E11	MFK-Z-E12	MFK-Z-E13	MFK-Z-E14	MFK-Z-E15	MFK-Z-E11	MFK-Z-E12
Analyte													
		Filtered 1	Filtered 1	Filtered 1	Filtered 1	Filtered 1	Filtered 2	Filtered 2	Filtered 2	Filtered 2	Filtered 2	Unfiltered	Unfiltered
Ammonia as N	mg/L	<0.01	0.01	<0.01	<0.01	<0.01							
Dissolved TKN as N	mg/L						0.8	0.7	0.6	0.8	0.8		
Filtered Total Nitrogen as N	mg/L						0.8	0.7	0.6	0.8	0.8		
Filtered Total Phosphorus as P	mg/L						0.1	0.14	0.15	0.11	0.1		
Nitrite+Nitrate as N	mg/L	0.02	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.04	0.02
Reactive Phosphorus as P	mg/L	0.07	0.11	0.12	0.08	0.07							
Total Kjeldahl Nitrogen as N	mg/L											0.8	1.7
Total Nitrogen as N	mg/L											0.8	1.7
Total Phosphorus as P	mg/L											0.07	0.3

Analysis Results - External Methods*

Area - EXTERNAL

	Sample ID	238614	238615	238616
	Start Date	20/09/2023	20/09/2023	20/09/2023
	Client ID	MFK-Z-E13	MFK-Z-E14	MFK-Z-E15
Analyte				
		Unfiltered	Unfiltered	Unfiltered
Nitrite+Nitrate as N	mg/L	0.02	0.02	0.02
Total Kjeldahl Nitrogen as N	mg/L	2	2.1	2.2
Total Nitrogen as N	mg/L	2	2.1	2.2
Total Phosphorus as P	mg/L	0.4	0.37	0.36

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Analysis Results - External Methods*

Area - EXTERNAL

Sample ID	238587	238588	238589	238590	238591
Start Date	20/09/2023	20/09/2023	20/09/2023	20/09/2023	20/09/2023
Client ID	MFK-Z-E11	MFK-Z-E12	MFK-Z-E13	MFK-Z-E14	MFK-Z-E15

Analyte		238587	238588	238589	238590	238591
Fixed Suspended Solids @ 550°C	mg/L	57	40	82	54	56
Suspended Solids (SS)	mg/L	78	71	112	88	101
Volatile Suspended Solids @ 550°C	mg/L	21	31	30	34	45

The sample(s) referred to in this report were analysed by the following method(s):

Method code	Method description	Area
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL
External Methods*	External Methods - Analysis completed externally	EXTERNAL

The results in this report were authorised by:

Name	Title	Area
[REDACTED]	Senior Scientist	EXTERNAL

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