



Environmental Forensics Report of Analysis

Project 20230150

Report #:

1657

Date Issued:

01-Jun-2023

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Client Project Reference: Menindee Fish Kill - 20 (7 May 2023

Customer: Department of Planning & Environment

Attention:

[Redacted]

EF Project Contact:

[Redacted]

[Redacted]

[Redacted]

Report Date: 01 June 2023

Project Received: 08 May 2023

The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
233001	B4-1	Liquid	07/05/2023 12:45PM	
233015	B4-1	Liquid	07/05/2023 12:45PM	Laboratory Aliquot
233002	B4-2	Liquid	07/05/2023 12:45PM	
233003	E6-1	Liquid	07/05/2023 1:45PM	Laboratory Aliquot
233016	E6-1	Liquid	07/05/2023 1:45PM	
233004	E6-2	Liquid	07/05/2023 1:45PM	
233005	E6.5-1	Liquid	07/05/2023 3:00PM	Laboratory Aliquot
233017	E6.5-1	Liquid	07/05/2023 3:00PM	
233006	E6.5-2	Liquid	07/05/2023 3:00PM	
233007	E7-1	Liquid	07/05/2023 3:30PM	
233018	E7-1	Liquid	07/05/2023 3:30PM	Laboratory Aliquot
233008	E7-2	Liquid	07/05/2023 3:30PM	
233009	E8-1	Liquid	07/05/2023 9:45AM	
233019	E8-1	Liquid	07/05/2023 9:45AM	Laboratory Aliquot
233010	E8-2	Liquid	07/05/2023 9:45AM	
233011	E9-1	Liquid	07/05/2023 10:30AM	
233020	E9-1	Liquid	07/05/2023 10:30AM	Laboratory Aliquot
233012	E9-2	Liquid	07/05/2023 10:30AM	
233013	E10-1	Liquid	07/05/2023 11:00AM	
233021	E10-1	Liquid	07/05/2023 11:00AM	Laboratory Aliquot
233014	E10-2	Liquid	07/05/2023 11:00AM	
233035	B4	Liquid	07/05/2023 1:00PM	
233036	E6	Liquid	07/05/2023 1:00PM	
233037	E6.5	Liquid	07/05/2023 1:00PM	
233038	E7	Liquid	07/05/2023 1:00PM	
233039	E8	Liquid	07/05/2023 1:00PM	
233040	E9	Liquid	07/05/2023 1:00PM	
233041	E10	Liquid	07/05/2023 1:00PM	
233536	B4 Filtered 1	Liquid	07/05/2023	

Tests not covered by NATA accreditation 3040 are denoted with \*

Codes: SN = Sample Note  
RN = Result Note

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233537	B4 Filtered 2	Liquid	07/05/2023
233538	B4 Unfiltered	Liquid	07/05/2023
233539	E6 Filtered 1	Liquid	07/05/2023
233540	E6 Filtered 2	Liquid	07/05/2023
233541	E6 Unfiltered	Liquid	07/05/2023
233542	E6.5 Filtered 1	Liquid	07/05/2023
233543	E6.5 Filtered 2	Liquid	07/05/2023
233544	E6.5 Unfiltered	Liquid	07/05/2023
233545	E7 Filtered 1	Liquid	07/05/2023
233546	E7 Filtered 2	Liquid	07/05/2023
233547	E7 Unfiltered	Liquid	07/05/2023
233548	E8 Filtered 1	Liquid	07/05/2023
233549	E8 Filtered 2	Liquid	07/05/2023
233550	E8 Unfiltered	Liquid	07/05/2023
233551	E9 Filtered 1	Liquid	07/05/2023
233552	E9 Filtered 2	Liquid	07/05/2023
233553	E9 Unfiltered	Liquid	07/05/2023
233554	E10 Filtered 1	Liquid	07/05/2023
233555	E10 Filtered 2	Liquid	07/05/2023
233556	E10 Unfiltered	Liquid	07/05/2023

**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 233001, 233003, 233005, 233007, 233009, 233011, 233013 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EP202A: Phenoxyacetic Acid Herbicides by LCMS, EP202S: Glyphosate and AMPA. This report summarises data from the attached external report: ES2315348, dated 16-May-2023.
- Samples 233536 to 233556 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EK055G: Ammonia as N by Discrete Analyser, EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser, EK061G: Total Kjeldahl Nitrogen By Discrete Analyser, EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser, EK067 G: Total Phosphorus as P by Discrete Analyser, EK071G: Reactive Phosphorus as P by discrete analyser. This report summarises data from the attached external report: ES23162 50, dated 22-May-2023.
- Samples 233002, 233004, 233006, 233008, 233010, 233012, 233014 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Blu e-Green Algal ID and Enumeration. Please see detailed results in the attached Phytoplankton Analysis Report no. 285315 dated 29 May 2023.
- Samples 233015 to 233021 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Algal Toxins. Please the attached Analytical Report No: 285315 dated 29 May 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.



**Analysis Results - External Methods\***

**Area - EXTERNAL**

Analyte	Sample ID	Start Date	Client ID	233001	233003	233005	233007	233009	233011	233013
				11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023
				B4-1	E6-1	E6.5-1	E7-1	E8-1	E9-1	E10-1
2,4,5-T				<10	<10	<10	<10	<10	<10	<10
2,4,6-T				<10	<10	<10	<10	<10	<10	<10
2,4-D				<10	<10	<10	<10	<10	<10	<10
2,4-DB				<10	<10	<10	<10	<10	<10	<10
2,4-DP				<10	<10	<10	<10	<10	<10	<10
2,6-D				<10	<10	<10	<10	<10	<10	<10
4-Chlorophenoxy acetic acid				<10	<10	<10	<10	<10	<10	<10
AMPA				<10	<10	<10	<10	<10	<10	<10
Clopyralid				<10	<10	<10	<10	<10	<10	<10
Dicamba				<10	<10	<10	<10	<10	<10	<10
Fluroxypyr				<10	<10	<10	<10	<10	<10	<10
Glyphosate				<10	<10	<10	<10	<10	<10	<10
MCPA				<10	<10	<10	<10	<10	<10	<10
MCPB				<10	<10	<10	<10	<10	<10	<10
Mecoprop				<10	<10	<10	<10	<10	<10	<10
Picloram				<10	<10	<10	<10	<10	<10	<10
Silvex (2,4,5-TP/Fenoprop)				<10	<10	<10	<10	<10	<10	<10
Tridopyr				<10	<10	<10	<10	<10	<10	<10

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**Analysis Results - IGR TSS**  
**Area - INORGANIC**

Analyte	Sample ID	Start Date	Client ID	233035	233036	233037	233038	233039	233040	233041
				11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023	11/05/2023
				B4	E6	E6.5	E7	E8	E9	E10
Fixed Suspended Solids	mg/L			7	25	55	55	28	36	57
Total Suspended Solids	mg/L			12	37	66	70	36	46	72
Volatile Suspended Solids	mg/L			<5	12	11	15	9	10	15

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
IGRTSS	Total Suspended Solids (TSS) (includes Volatile and Fixed Suspended Solids)	INORGANIC

The results in this report were authorised by:

Name	Title	Area
	Senior Scientist	EXTERNAL
	Scientist	INORGANIC

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