



Environmental Forensics Report of Analysis
Project 20230174

Report #: 1704
Date Issued: 07-Jul-2023
Page 1 of 14

Client Project Reference: Menindee Fish Kill - 27 (17 May 202

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 07 July 2023

Project Received: 19 May 2023

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



The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
233856	B4	Liquid	17/05/2023 12:50PM	
233863	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233870	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233877	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233884	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233891	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233944	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233945	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233946	B4	Liquid	17/05/2023 12:50PM	Field Aliquot
233857	E6	Liquid	17/05/2023 1:47PM	
233864	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233871	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233878	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233885	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233892	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233947	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233948	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233949	E6	Liquid	17/05/2023 1:47PM	Field Aliquot
233858	E6.5	Liquid	17/05/2023 2:40PM	
233865	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233872	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233879	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233886	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233893	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233950	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233951	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233952	E6.5	Liquid	17/05/2023 2:40PM	Field Aliquot
233859	E7	Liquid	17/05/2023 3:15PM	
233866	E7	Liquid	17/05/2023 3:15PM	Field Aliquot

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



233873	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233880	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233887	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233894	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233953	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233954	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233955	E7	Liquid	17/05/2023	3:15PM	Field Aliquot
233860	E8	Liquid	17/05/2023	9:10AM	
233867	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233874	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233881	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233888	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233895	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233956	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233957	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233958	E8	Liquid	17/05/2023	9:10AM	Field Aliquot
233861	E9	Liquid	17/05/2023	10:30AM	
233868	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233875	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233882	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233889	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233896	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233959	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233960	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233961	E9	Liquid	17/05/2023	10:30AM	Field Aliquot
233862	E10	Liquid	17/05/2023	11:25AM	
233869	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233876	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233883	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233890	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233897	E10	Liquid	17/05/2023	11:25AM	Field Aliquot

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233962	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233963	E10	Liquid	17/05/2023	11:25AM	Field Aliquot
233964	E10	Liquid	17/05/2023	11:25AM	Field Aliquot

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 233944 to 233964 were 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 (NOx) 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 + NOx) by Discrete Analyser, EK067FG - Filtered Total Phosphorus as P by Discrete Analyser, EK067G - Total Phosphorus as P by Discrete Analyser, EK071G - Reactive Phosphorus as P by discrete analyser. This report summarises data from the attached external report: ES2317132 Amendment 1 dated 2-June-2023.

Samples 233856 to 233862 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EP202A: Phenoxyacetic Acid Herbicides by LCMS and EP204: Glyphosate and AMPA. This report summarises data from the attached external report: ES2317132 Amendment 1 dated 2-June-2023.

· Sample 233880 was analysed for mercury past the required method holding time.

· Samples 233884 to 233890 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. 287367 dated 7 June 2023.

Samples 233870 to 233876 were 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. 287367 dated 7 June 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.



Analysis Results - External Methods*		<i>Sample ID</i>	233870	233884	233871	233885	233872	233886	233873	233887	233874	233888	233875	233889
Area - EXTERNAL		<i>Start Date</i>	25/05/2023	6/06/2023	25/05/2023	6/06/2023	25/05/2023	6/06/2023	25/05/2023	6/06/2023	25/05/2023	6/06/2023	25/05/2023	6/06/2023
		<i>Client ID</i>	B4	B4	E6	E6	E6.5	E6.5	E7	E7	E8	E8	E9	E9
<i>Analyte</i>														
Algal Enumeration	-			RC		RC		RC		RC		RC		RC
Algal Identification	-			RC		RC		RC		RC		RC		RC
Algal Toxins	-		RC		RC		RC		RC		RC		RC	

Analysis Results - External Methods*		<i>Sample ID</i>	233876	233890
Area - EXTERNAL		<i>Start Date</i>	25/05/2023	6/06/2023
		<i>Client ID</i>	E10	E10
<i>Analyte</i>				
Algal Enumeration	-			RC
Algal Identification	-			RC
Algal Toxins	-		RC	

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Analysis Results - External Methods*

Area - EXTERNAL

		Sample ID	233856	233857	233858	233859	233860	233861	233862
		Start Date	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023
		Client ID	B4	E6	E6.5	E7	E8	E9	E10
Analyte									
2.4.5-T	µg/L		<10	<10	<10	<10	<10	<10	<10
2.4.6-T	µg/L		<10	<10	<10	<10	<10	<10	<10
2.4-D	µg/L		<10	<10	<10	<10	<10	<10	<10
2.4-DB	µg/L		<10	<10	<10	<10	<10	<10	<10
2.4-DP	µg/L		<10	<10	<10	<10	<10	<10	<10
2.6-D	µg/L		<10	<10	<10	<10	<10	<10	<10
4-Chlorophenoxy acetic acid	µg/L		<10	<10	<10	<10	<10	<10	<10
AMPA	µg/L		<10	<10	<10	<10	<10	<10	<10
Clopyralid	µg/L		<10	<10	<10	<10	<10	<10	<10
Dicamba	µg/L		<10	<10	<10	<10	<10	<10	<10
Fluroxypyr	µg/L		<10	<10	<10	<10	<10	<10	<10
Glyphosate	µg/L		<10	<10	<10	<10	<10	<10	<10
MCPA	µg/L		<10	<10	<10	<10	<10	<10	<10
MCPB	µg/L		<10	<10	<10	<10	<10	<10	<10
Mecoprop	µg/L		<10	<10	<10	<10	<10	<10	<10
Pricloram	µg/L		<10	<10	<10	<10	<10	<10	<10
Silvex (2.4.5-TP/Fenoprop)	µg/L		<10	<10	<10	<10	<10	<10	<10
Triclopyr	µg/L		<10	<10	<10	<10	<10	<10	<10

Analysis Results - External Methods*

Area - EXTERNAL

		Sample ID	233944	233945	233946	233947	233948	233949	233950	233951	233952	233953	233954	233955
		Start Date	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023
		Client ID	B4 Filtered 1	B4 Filtered 2	B4 Unfiltered	E6 Filtered 1	E6 Filtered 2	E6 Unfiltered	E6.5 Filtered 1	E6.5 Filtered 2	E6.5 Unfiltered	E7 Filtered 1	E7 Filtered 2	E7 Unfiltered
Analyte														
Ammonia as N	mg/L		<0.01			0.12			<0.01			0.03		
Dissolved TKN as N	mg/L			0.7				1.1		0.8			0.7	
Filtered Total Nitrogen as N	mg/L			0.7				1.1		0.8			0.7	
Filtered Total Phosphorus as P	mg/L			0.22				0.15		0.27			0.21	
Nitrite+Nitrate as N	mg/L		0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	<0.01	0.01	0.01
Reactive Phosphorus as P	mg/L		0.29			0.15			0.30			0.21		
Total Kjeldahl Nitrogen as N	mg/L				0.6				1.3		0.8			1.2
Total Nitrogen as N	mg/L				0.6				1.3		0.8			1.2
Total Phosphorus as P	mg/L				0.30				0.26		0.34			0.36

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte

	<i>Sample ID</i>	233956	233957	233958	233959	233960	233961	233962	233963	233964
	<i>Start Date</i>	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023
	<i>Client ID</i>	E8 Filtered 1	E8 Filtered 2	E8 Unfiltered	E9 Filtered 1	E9 Filtered 2	E9 Unfiltered	E10 Filtered 1	E10 Filtered 2	E10 Unfiltered
Ammonia as N	mg/L	0.05			0.05			0.03		
Dissolved TKN as N	mg/L		0.8			0.8			0.9	
Filtered Total Nitrogen as N	mg/L		0.8			0.8			1.0	
Filtered Total Phosphorus as P	mg/L		0.18			0.14			0.14	
Nitrite+Nitrate as N	mg/L	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
Reactive Phosphorus as P	mg/L	0.16			0.15			0.12		
Total Kjeldahl Nitrogen as N	mg/L			1.1			1.0			1.3
Total Nitrogen as N	mg/L			1.1			1.0			1.4
Total Phosphorus as P	mg/L			0.24			0.25			0.24

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Analysis Results - ICVAASW

Area - INORGANIC

Analyte

		233877	233878	233879	233880	233881	233882	233883
		30/05/2023	30/05/2023	30/05/2023	19/06/2023	30/05/2023	30/05/2023	30/05/2023
		B4	E6	E6.5	E7	E8	E9	E10
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES

Area - INORGANIC

Analyte

		233877	233878	233879	233880	233881	233882	233883
		22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023
		B4	E6	E6.5	E7	E8	E9	E10
Aluminium (Lab. filtered)	mg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Barium (Lab. filtered)	mg/L	0.10	0.11	0.10	0.10	0.11	0.11	0.10
Boron (Lab. filtered)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (Lab. filtered)	mg/L	34	35	33	35	34	34	32
Iron (Lab. filtered)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (Lab. filtered)	mg/L	14	14	13	14	15	15	16
Potassium (Lab. filtered)	mg/L	12	12	12	12	12	12	12
Sodium (Lab. filtered)	mg/L	39	40	39	40	41	42	44
Strontium (Lab. filtered)	mg/L	0.34	0.35	0.33	0.35	0.35	0.35	0.35
Sulfur (Lab. filtered)	mg/L	4.3	4.5	4.1	4.2	3.5	3.5	3.2
Titanium (Lab. filtered)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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Analysis Results - ICPMS

Area - INORGANIC

Analyte

	<i>Sample ID</i>	233877	233878	233879	233880	233881	233882	233883
	<i>Start Date</i>	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023
	<i>Client ID</i>	B4	E6	E6.5	E7	E8	E9	E10
Antimony (Lab. filtered)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L	0.006	0.005	0.006	0.005	0.004	0.004	0.004
Beryllium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt (Lab. filtered)	mg/L	<0.0001	0.0002	<0.0001	0.0001	0.0002	0.0002	0.0003
Copper (Lab. filtered)	mg/L	0.0024	0.0020	0.0023	0.0019	0.0022	0.0023	0.0021
Lead (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium (Lab. filtered)	mg/L	0.0020	0.0020	0.0019	0.0020	0.0016	0.0017	0.0018
Manganese (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L	0.0013	0.0013	0.0013	0.0014	0.0013	0.0012	0.0013
Nickel (Lab. filtered)	mg/L	0.0022	0.0023	0.0022	0.0022	0.0028	0.0029	0.0031
Selenium (Lab. filtered)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin (Lab. filtered)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium (Lab. filtered)	mg/L	0.019	0.017	0.020	0.020	0.012	0.012	0.012
Zinc (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001

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Analysis Results - ICPAES

Area - INORGANIC

		Sample ID 22/05/2023 B4	233878 22/05/2023 E6	233879 22/05/2023 E6.5	233880 22/05/2023 E7	233881 22/05/2023 E8	233882 22/05/2023 E9	233883 22/05/2023 E10
Aluminium (acid extractable)	mg/L	2.7	4.2	3.2	6.1	5.3	5.6	5.7
Barium (acid extractable)	mg/L	0.11	0.13	0.12	0.13	0.13	0.13	0.14
Boron (acid extractable)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (acid extractable)	mg/L	35	37	36	37	36	36	35
Iron (acid extractable)	mg/L	1.8	3.2	2.2	4.1	4.1	4.4	4.7
Magnesium (acid extractable)	mg/L	14	16	15	15	17	17	18
Manganese (acid extractable)	mg/L		0.06	0.02	0.09	0.10	0.12	0.14
Potassium (acid extractable)	mg/L	13	15	13	13	13	13	14
Sodium (acid extractable)	mg/L	40	45	41	42	43	44	46
Strontium (acid extractable)	mg/L	0.35	0.38	0.36	0.39	0.38	0.38	0.39
Sulfur (acid extractable)	mg/L	4.4	4.7	4.3	4.7	3.7	3.6	3.4
Titanium (acid extractable)	mg/L	0.08	0.08	0.10	0.06	0.13	0.11	0.08

Analyte

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Analysis Results - ICPMS

Area - INORGANIC

		Sample ID	233877	233878	233879	233880	233881	233882	233883
		Start Date	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023
		Client ID	B4	E6	E6.5	E7	E8	E9	E10
<i>Analyte</i>									
Antimony (acid extractable)	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L		0.006	0.006	0.007	0.005	0.005	0.005	0.005
Beryllium (acid extractable)	mg/L		<0.0001	<0.0001	<0.0001	0.0002	0.0001	0.0001	0.0001
Cadmium (acid extractable)	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (acid extractable)	mg/L		0.002	0.003	0.002	0.006	0.004	0.005	0.005
Cobalt (acid extractable)	mg/L		0.0005	0.0013	0.0007	0.0017	0.0016	0.0018	0.0024
Copper (acid extractable)	mg/L		0.0036	0.0044	0.0038	0.0052	0.0046	0.0048	0.0049
Lead (acid extractable)	mg/L		0.0003	0.0007	0.0004	0.0014	0.0011	0.0012	0.0014
Lithium (acid extractable)	mg/L		0.0025	0.0029	0.0026	0.0041	0.0029	0.0030	0.0032
Manganese (acid extractable)	mg/L		0.016						
Molybdenum (acid extractable)	mg/L		0.0013	0.0013	0.0013	0.0014	0.0013	0.0012	0.0013
Nickel (acid extractable)	mg/L		0.0035	0.0049	0.0037	0.0064	0.0058	0.0063	0.0087
Selenium (acid extractable)	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver (acid extractable)	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thallium (acid extractable)	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin (acid extractable)	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium (acid extractable)	mg/L		0.022	0.024	0.023	0.031	0.020	0.020	0.022
Zinc (acid extractable)	mg/L		0.006	0.007	0.004	0.010	0.011	0.010	0.010

Analysis Results - IGRSS

Area - INORGANIC

		Sample ID	233891	233892	233893	233894	233895	233896	233897
		Start Date	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023	23/05/2023
		Client ID	B4	E6	E6.5	E7	E8	E9	E10
<i>Analyte</i>									
Fixed Suspended Solids	mg/L		5	48	21	65	34	55	69
Total Suspended Solids	mg/L		8	57	26	78	40	64	81
Volatile Suspended Solids	mg/L		<3	9	5	13	6	9	12

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Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



Analysis Results - QQPEST

Area - ORGANIC

Sample ID
Start Date
Client ID

Analyte		233863 24/05/2023 B4	233864 24/05/2023 E6	233865 24/05/2023 E6.5	233866 24/05/2023 E7	233867 24/05/2023 E8	233868 24/05/2023 E9	233869 24/05/2023 E10
Aldrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Allethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Alpha-Chlordane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
alpha-HCH	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Ametryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Atraton	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Atrazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
beta-HCH	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bifenthrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bioresmethrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carbophenothion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Cis-permethrin	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Crotoxyphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cyfluthrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cypermethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
delta-HCH	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Deltamethrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorvos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dieldrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan II	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Endosulfan I	µg/L	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Endosulfan Sulfate	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Endrin Aldehyde	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin Ketone	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenamiphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

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Analysis Results - QQPEST

Area - ORGANIC

Analyte	Sample ID Start Date Client ID	233863	233864	233865	233866	233867	233868	233869
		24/05/2023 B4	24/05/2023 E6	24/05/2023 E6.5	24/05/2023 E7	24/05/2023 E8	24/05/2023 E9	24/05/2023 E10
Fenvalerate	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Gamma-Chlordane	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
gamma-HCH	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Heptachlor Epoxide	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Hexachlorobenzene	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Hexazinone	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
L-cyhalothrin	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methidathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Azinphos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Chlorpyrifos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Parathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Oxyfluorfen	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Parathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phorate	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Profenofos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Prometon	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Prometryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propargite	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Propetamphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Simazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Simetryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulprofos	µg/L	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Tebuconazole	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tebuthiuron	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Terbutylazine	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Terbutryn	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachlorvinphos	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trans-permethrin	µg/L	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7

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Area - ORGANIC

Sample ID	Client ID	Method	Start Date	Result
233863	B4	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233864	E6	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233865	E6.5	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233866	E7	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233867	E8	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233868	E9	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).
233869	E10	OLCSCAN* - LC/MS Scan	26/05/2023	LC/MS scan for approximately 600 pesticides was negative. A list of analysed compounds can be provided on request. Note the list doesn't include glyphosate and quaternary ammonium herbicides (e.g. Paraquat and Diquat).

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
ICVAASW	Mercury by Cold Vapour Atomic Absorption Spectroscopy	INORGANIC
ICPAES	Dissolved element analysis by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICPAES)	INORGANIC
ICPMS	Dissolved Metals by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	INORGANIC
ICPAES	Acid extractable element analysis by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICPAES)	INORGANIC
ICPMS	Acid extractable Metals by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)	INORGANIC
IGRTSS	Total Suspended Solids (TSS) (includes Volatile and Fixed Suspended Solids)	INORGANIC
QQQPEST	Determination of Multiresidue Pesticides by GCMSMS	ORGANIC
OLCSCAN*	Qualitative LC/MS scan	ORGANIC

The results in this report were authorised by:

Name	Title	Area
[REDACTED]	Senior Scientist	EXTERNAL
[REDACTED]	Scientist	INORGANIC
[REDACTED]	Scientist	ORGANIC

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