



Environmental Forensics Report of Analysis
Project 20230233

Report #: 1774
Date Issued: 31-Jul-2023
Page 1 of 15

Client Project Reference: Menindee Fish Kill - 42 (IMT 27 Jun

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 31 July 2023

Project Received: 28 June 2023

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



The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot
235768	B1	Liquid	27/06/2023 3:07PM	
235776	B1	Liquid	27/06/2023 3:07PM	Field Aliquot
235784	B1	Liquid	27/06/2023 3:07PM	Field Aliquot
235792	B1	Liquid	27/06/2023 3:07PM	Field Aliquot
235800	B1	Liquid	27/06/2023 3:07PM	Field Aliquot
235809	B1	Liquid	27/06/2023 3:07PM	Laboratory Aliquot
235769	B2	Liquid	27/06/2023 11:42AM	
235777	B2	Liquid	27/06/2023 11:42AM	Field Aliquot
235785	B2	Liquid	27/06/2023 11:42AM	Field Aliquot
235793	B2	Liquid	27/06/2023 11:42AM	Field Aliquot
235801	B2	Liquid	27/06/2023 11:42AM	Field Aliquot
235810	B2	Liquid	27/06/2023 11:42AM	Laboratory Aliquot
235770	B3	Liquid	27/06/2023 2:00PM	
235778	B3	Liquid	27/06/2023 2:00PM	Field Aliquot
235786	B3	Liquid	27/06/2023 2:00PM	Field Aliquot
235794	B3	Liquid	27/06/2023 2:00PM	Field Aliquot
235802	B3	Liquid	27/06/2023 2:00PM	Field Aliquot
235811	B3	Liquid	27/06/2023 2:00PM	Laboratory Aliquot
235771	E1	Liquid	27/06/2023 11:10AM	
235779	E1	Liquid	27/06/2023 11:10AM	Field Aliquot
235787	E1	Liquid	27/06/2023 11:10AM	Field Aliquot
235795	E1	Liquid	27/06/2023 11:10AM	Field Aliquot
235803	E1	Liquid	27/06/2023 11:10AM	Field Aliquot
235812	E1	Liquid	27/06/2023 11:10AM	Laboratory Aliquot
235772	E2	Liquid	27/06/2023 10:30AM	
235780	E2	Liquid	27/06/2023 10:30AM	Field Aliquot
235788	E2	Liquid	27/06/2023 10:30AM	Field Aliquot
235796	E2	Liquid	27/06/2023 10:30AM	Field Aliquot
235804	E2	Liquid	27/06/2023 10:30AM	Field Aliquot

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



235813	E2	Liquid	27/06/2023	10:30AM	Laboratory Aliquot
235773	E3	Liquid	27/06/2023	9:55AM	
235781	E3	Liquid	27/06/2023	9:55AM	Field Aliquot
235789	E3	Liquid	27/06/2023	9:55AM	Field Aliquot
235797	E3	Liquid	27/06/2023	9:55AM	Field Aliquot
235805	E3	Liquid	27/06/2023	9:55AM	Field Aliquot
235814	E3	Liquid	27/06/2023	9:55AM	Laboratory Aliquot
235774	E4	Liquid	27/06/2023	12:15PM	
235782	E4	Liquid	27/06/2023	12:15PM	Field Aliquot
235790	E4	Liquid	27/06/2023	12:15PM	Field Aliquot
235798	E4	Liquid	27/06/2023	12:15PM	Field Aliquot
235806	E4	Liquid	27/06/2023	12:15PM	Field Aliquot
235815	E4	Liquid	27/06/2023	12:15PM	Laboratory Aliquot
235775	E5	Liquid	27/06/2023	12:53PM	
235783	E5	Liquid	27/06/2023	12:53PM	Field Aliquot
235791	E5	Liquid	27/06/2023	12:53PM	Field Aliquot
235799	E5	Liquid	27/06/2023	12:53PM	Field Aliquot
235807	E5	Liquid	27/06/2023	12:53PM	Field Aliquot
235816	E5	Liquid	27/06/2023	12:53PM	Laboratory Aliquot
235817	MFK-Z-B3-F1	Liquid	27/06/2023		
235818	MFK-Z-B3-F2	Liquid	27/06/2023		
235819	MFK-Z-B3-UNF	Liquid	27/06/2023		
235820	MFK-Z-E4-F1	Liquid	27/06/2023		
235821	MFK-Z-E4-F2	Liquid	27/06/2023		
235822	MFK-Z-E4-UNF	Liquid	27/06/2023		
235823	MFK-Z-E5-F1	Liquid	27/06/2023		
235824	MFK-Z-E5-F2	Liquid	27/06/2023		
235825	MFK-Z-E5-UNF	Liquid	27/06/2023		
235826	MFK-BW-B2 F1	Liquid	27/06/2023		
235827	MFK-BW-B2 F2	Liquid	27/06/2023		
235828	MFK-BW-B2 UNF	Liquid	27/06/2023		

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235829	MFK-BW-B3 F1	Liquid	27/06/2023
235830	MFK-BW-B3 F2	Liquid	27/06/2023
235831	MFK-BW-B3 UNF	Liquid	27/06/2023
235832	MFK-BW-E2 F1	Liquid	27/06/2023
235833	MFK-BW-E2 F2	Liquid	27/06/2023
235834	MFK-BW-E2 UNF	Liquid	27/06/2023
235835	MFK-BW-E4 F1	Liquid	27/06/2023
235836	MFK-BW-E4 F2	Liquid	27/06/2023
235837	MFK-BW-E4 UNF	Liquid	27/06/2023
235838	MFK-BW-E5 F1	Liquid	27/06/2023
235839	MFK-BW-E5 F2	Liquid	27/06/2023
235840	MFK-BW-E5 UNF	Liquid	27/06/2023

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 235809 to 235816 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EP202A: Phenoxyacetic Acid Herbicides by LCMS and E P204: Glyphosate and AMPA. This report summarises data from the attached external report: ES2321727, dated 04-Jul-2023.

Samples 235817 to 235840 were also sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EK255A: Ammonia, EK259A: Nitrite and Nitrate (NO_x), EK262A: Total Nitrogen, EK267A: Total Phosphorus (Persulfate Digestion), EK271A: Reactive Phosphorus. This report also summarises data from the attached external report: ES 2321727, dated 04-Jul-2023.

· Samples 235800 to 235807 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. 287892 dated 14 July 2023.

Samples 235784 to 235791 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: 287892 dated 14 July 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.

· Samples 235768 to 235775 were analysed outside the method holding time for Pesticides by GCMSMS.
Samples 235776 to 235783 were analysed outside the method holding time for Total suspended solids



Analysis Results - External Methods*		<i>Sample ID</i>	235784	235800	235785	235801	235786	235802	235787	235803	235788	235804	235789	235805
Area - EXTERNAL		<i>Start Date</i>	30/06/2023	13/07/2023	30/06/2023	13/07/2023	30/06/2023	13/07/2023	30/06/2023	13/07/2023	30/06/2023	13/07/2023	30/06/2023	13/07/2023
		<i>Client ID</i>	B1	B1	B2	B2	B3	B3	E1	E1	E2	E2	E3	E3
<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>	235790	235806	235791	235807
Area - EXTERNAL		<i>Start Date</i>	30/06/2023	13/07/2023	30/06/2023	13/07/2023
		<i>Client ID</i>	E4	E4	E5	E5
<i>Analyte</i>						
Algal Enumeration	-			RC		RC
Algal Identification	-			RC		RC
Algal Toxins	-		RC		RC	

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID Start Date Client ID	235809	235810	235811	235812	235813	235814	235815	235816
		29/06/2023 B1	29/06/2023 B2	29/06/2023 B3	29/06/2023 E1	29/06/2023 E2	29/06/2023 E3	29/06/2023 E4	29/06/2023 E5
2.4.5-T	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
2.4.6-T	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
2.4-D	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
2.4-DB	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
2.4-DP	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
2.6-D	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenoxy acetic acid	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
AMPA	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Clopyralid	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Dicamba	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Fluroxypyr	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Glyphosate	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
MCPA	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
MCPB	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Mecoprop	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Pricloram	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Silvex (2.4.5-TP/Fenoprop)	µg/L	<10	<10	<10	<10	<10	<10	<10	<10
Triclopyr	µg/L	<10	<10	<10	<10	<10	<10	<10	<10

Analysis Results - External Methods*

Area - EXTERNAL

Analyte	Sample ID Start Date Client ID	235817	235818	235819	235820	235821	235822	235823	235824	235825	235826	235827	235828
		29/06/2023 MFK-Z-B3-F 1	29/06/2023 MFK-Z-B3-F 2	29/06/2023 MFK-Z-B3-U NF	29/06/2023 MFK-Z-E4-F 1	29/06/2023 MFK-Z-E4-F 2	29/06/2023 MFK-Z-E4-U NF	29/06/2023 MFK-Z-E5-F 1	29/06/2023 MFK-Z-E5-F 2	29/06/2023 MFK-Z-E5-U NF	29/06/2023 MFK-BW-B2 F1	29/06/2023 MFK-BW-B2 F2	29/06/2023 MFK-BW-B2 UNF
Ammonia as N	mg/L	0.006			0.059			0.009			0.098		
Dissolved Total Nitrogen as N	mg/L		0.57			0.86		0.64			0.85		
Dissolved Total Phosphorus as P	mg/L		0.307			0.07		0.18			0.052		
Nitrite+Nitrate as N	mg/L	0.009			0.043			<0.002			0.029		
Reactive Phosphorus as P	mg/L	0.265			0.043			0.128			0.026		
Total Nitrogen as N	mg/L			0.73			1.54			1.07			1.19
Total Phosphorus as P	mg/L			0.41			0.238			0.203			0.151

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte

	<i>Sample ID</i>	235829	235830	235831	235832	235833	235834	235835	235836	235837	235838	235839	235840
	<i>Start Date</i>	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023
	<i>Client ID</i>	MFK-BW-B3	MFK-BW-B3	MFK-BW-B3	MFK-BW-E2	MFK-BW-E2	MFK-BW-E2	MFK-BW-E4	MFK-BW-E4	MFK-BW-E4	MFK-BW-E5	MFK-BW-E5	MFK-BW-E5
		F1	F2	UNF	F1	F2	UNF	F1	F2	UNF	F1	F2	UNF
Ammonia as N	mg/L	0.006			0.007			0.099			<0.005		
Dissolved Total Nitrogen as N	mg/L		0.66			0.67			0.86			0.69	
Dissolved Total Phosphorus as P	mg/L		0.292			0.044			0.087			0.158	
Nitrite+Nitrate as N	mg/L	0.027			0.003			0.043			0.008		
Reactive Phosphorus as P	mg/L	0.266			0.02			0.052			0.13		
Total Nitrogen as N	mg/L			0.75			1.12			1.18			0.95
Total Phosphorus as P	mg/L			0.347			0.083			0.144			0.27

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Analysis Results - ICVAASW

Area - INORGANIC

Analyte

		235792 18/07/2023 B1	235793 18/07/2023 B2	235794 18/07/2023 B3	235795 18/07/2023 E1	235796 18/07/2023 E2	235797 18/07/2023 E3	235798 18/07/2023 E4	235799 18/07/2023 E5
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES

Area - INORGANIC

Analyte

		235792 29/06/2023 B1	235793 29/06/2023 B2	235794 29/06/2023 B3	235795 29/06/2023 E1	235796 29/06/2023 E2	235797 29/06/2023 E3	235798 29/06/2023 E4	235799 29/06/2023 E5
Aluminium (Lab. filtered)	mg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Barium (Lab. filtered)	mg/L	0.15	0.15	0.09	0.15	0.15	0.13	0.12	0.11
Boron (Lab. filtered)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (Lab. filtered)	mg/L	49	47	29	48	48	41	40	36
Iron (Lab. filtered)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (Lab. filtered)	mg/L	26	24	12	24	25	19	19	17
Potassium (Lab. filtered)	mg/L	11	11	11	11	12	13	13	12
Sodium (Lab. filtered)	mg/L	83	78	39	79	79	60	59	53
Strontium (Lab. filtered)	mg/L	0.54	0.51	0.30	0.52	0.53	0.44	0.44	0.39
Sulfur (Lab. filtered)	mg/L	7.0	6.7	3.4	7.0	6.8	4.7	4.4	4.2
Titanium (Lab. filtered)	mg/L	<0.01	<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>	235792	235793	235794	235795	235796	235797	235798	235799
	<i>Start Date</i>	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023	29/06/2023
	<i>Client ID</i>	B1	B2	B3	E1	E2	E3	E4	E5
Antimony (Lab. filtered)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L	0.001	0.002	0.006	0.001	0.001	0.002	0.003	0.004
Beryllium (Lab. filtered)	mg/L	<0.0001	<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	<0.0001
Chromium (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt (Lab. filtered)	mg/L	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002
Copper (Lab. filtered)	mg/L	0.0012	0.0012	0.0029	0.0012	0.0012	0.0017	0.0016	0.0020
Lead (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium (Lab. filtered)	mg/L	0.0018	0.0017	0.0014	0.0017	0.0018	0.0017	0.0017	0.0016
Manganese (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L	0.0013	0.0015	0.0012	0.0015	0.0016	0.0017	0.0017	0.0014
Nickel (Lab. filtered)	mg/L	0.0024	0.0026	0.0022	0.0026	0.0027	0.0032	0.0031	0.0025
Selenium (Lab. filtered)	mg/L	<0.005	<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	<0.0001
Thallium (Lab. filtered)	mg/L	<0.0001	<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	<0.0002
Vanadium (Lab. filtered)	mg/L	0.0037	0.0043	0.019	0.0040	0.0044	0.0077	0.0076	0.012
Zinc (Lab. filtered)	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

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Analysis Results - ICPAES

Area - INORGANIC

	<i>Sample ID</i>	235792	235793	235794	235795	235796	235797	235798	235799
	<i>Start Date</i>	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023
	<i>Client ID</i>	B1	B2	B3	E1	E2	E3	E4	E5
<i>Analyte</i>									
Aluminium (acid extractable)	mg/L	0.54	1.1	6.6	1.1	1.2	2.1	1.8	3.4
Barium (acid extractable)	mg/L	0.16	0.16	0.11	0.17	0.16	0.15	0.14	0.14
Boron (acid extractable)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (acid extractable)	mg/L	49	49	32	50	49	43	42	39
Iron (acid extractable)	mg/L	0.4	0.9	5.1	0.9	1.0	1.6	1.4	2.6
Magnesium (acid extractable)	mg/L	26	26	14	26	25	21	20	19
Manganese (acid extractable)	mg/L	0.08	0.10	0.06	0.11	0.11	0.10	0.10	0.08
Potassium (acid extractable)	mg/L	12	12	13	12	13	14	14	14
Sodium (acid extractable)	mg/L	83	82	41	84	79	63	61	55
Strontium (acid extractable)	mg/L	0.54	0.54	0.33	0.56	0.53	0.47	0.46	0.42
Sulfur (acid extractable)	mg/L	7.0	7.0	3.6	7.4	6.8	4.9	4.7	4.6
Titanium (acid extractable)	mg/L	<0.01	0.01	0.05	0.01	<0.01	0.02	0.02	0.03

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Analysis Results - ICPMS

Area - INORGANIC

<i>Sample ID</i>	<i>Start Date</i>	<i>Client ID</i>	235792	235793	235794	235795	235796	235797	235798	235799
			3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023
			B1	B2	B3	E1	E2	E3	E4	E5

Analyte

Antimony (acid extractable)	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L		0.001	0.002	0.007	0.002	0.002	0.003	0.003	0.004
Beryllium (acid extractable)	mg/L		<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<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	<0.0001
Chromium (acid extractable)	mg/L		<0.001	0.001	0.006	0.001	0.001	0.002	0.002	0.003
Cobalt (acid extractable)	mg/L		0.0007	0.0009	0.0016	0.0010	0.0010	0.0012	0.0011	0.0012
Copper (acid extractable)	mg/L		0.0016	0.0020	0.0058	0.0020	0.0020	0.0029	0.0028	0.0037
Lead (acid extractable)	mg/L		0.0004	0.0005	0.0013	0.0007	0.0006	0.0008	0.0008	0.0009
Lithium (acid extractable)	mg/L		0.0020	0.0022	0.0033	0.0022	0.0021	0.0023	0.0022	0.0025
Molybdenum (acid extractable)	mg/L		0.0013	0.0016	0.0012	0.0016	0.0016	0.0017	0.0017	0.0014
Nickel (acid extractable)	mg/L		0.0033	0.0036	0.0061	0.0035	0.0036	0.0044	0.0045	0.0050
Selenium (acid extractable)	mg/L		<0.005	<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	<0.0001
Thallium (acid extractable)	mg/L		<0.0001	<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	0.0004	<0.0002	<0.0002	<0.0002
Vanadium (acid extractable)	mg/L		0.0055	0.0067	0.027	0.0068	0.0073	0.011	0.011	0.016
Zinc (acid extractable)	mg/L		0.002	0.002	0.010	0.002	0.002	0.005	0.004	0.006

Analysis Results - IGRSS

Area - INORGANIC

<i>Sample ID</i>	<i>Start Date</i>	<i>Client ID</i>	235776	235777	235778	235779	235780	235781	235782	235783
			25/07/2023	25/07/2023	25/07/2023	25/07/2023	25/07/2023	25/07/2023	25/07/2023	25/07/2023
			B1	B2	B3	E1	E2	E3	E4	E5

Analyte

Fixed Suspended Solids	mg/L		9	15	22	26	19	31	45	15
Total Suspended Solids	mg/L		16	21	27	34	28	40	54	20
Volatile Suspended Solids	mg/L		6	6	5	9	<10	9	9	6

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Analysis Results - QQPEST
Area - ORGANIC

Analyte	Sample ID Start Date Client ID	235768	235769	235770	235771	235772	235773	235774	235775
		5/07/2023 B1	5/07/2023 B2	5/07/2023 B3	5/07/2023 E1	5/07/2023 E2	5/07/2023 E3	5/07/2023 E4	5/07/2023 E5
Aldrin	µg/L	<0.3	<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	<0.5
Alpha-Chlordane	µg/L	<0.4	<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	<0.4
Ametryn	µg/L	<0.5	<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	<0.5
Atrazine	µg/L	<0.5	<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	<0.5
Bifenthrin	µg/L	<0.5	<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	<0.3
Carbophenothion	µg/L	<0.5	<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	<0.4
Cis-permethrin	µg/L	<0.3	<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	<0.5
Cyfluthrin	µg/L	<0.5	<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	<0.5
delta-HCH	µg/L	<0.5	<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	<0.5
Diazinon	µg/L	<0.5	<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	<0.4
Dieldrin	µg/L	<0.5	<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	<0.5
Endosulfan II	µg/L	<1.0	<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	<0.9
Endosulfan Sulfate	µg/L	<1.0	<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	<0.5
Endrin Ketone	µg/L	<0.5	<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	<0.5
Ethion	µg/L	<0.5	<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	<0.5
Fenitrothion	µg/L	<0.5	<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	<0.4

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Analysis Results - QQPEST
Area - ORGANIC

Analyte	Sample ID Start Date Client ID	235768	235769	235770	235771	235772	235773	235774	235775
		5/07/2023 B1	5/07/2023 B2	5/07/2023 B3	5/07/2023 E1	5/07/2023 E2	5/07/2023 E3	5/07/2023 E4	5/07/2023 E5
Fenvalerate	µg/L	<0.5	<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	<0.4
gamma-HCH	µg/L	<0.4	<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	<0.5
Heptachlor	µg/L	<0.4	<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	<0.3
Hexazinone	µg/L	<0.5	<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	<0.5
Malathion	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methidathion	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Azinphos	µg/L	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Methyl Chlorpyrifos	µg/L	<0.4	<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	<0.5
Mevinphos	µg/L	<0.4	<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	<0.5
Parathion	µg/L	<0.5	<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	<0.4
Profenofos	µg/L	<0.5	<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	<0.5
Prometryn	µg/L	<0.5	<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	<0.5
Propazine	µg/L	<0.5	<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	<0.5
Simazine	µg/L	<0.5	<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	<0.5
Sulprofos	µg/L	<0.4	<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	<0.5
Tebuthiuron	µg/L	<0.5	<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	<0.5
Terbutryn	µg/L	<0.5	<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	<0.5
Trans-permethrin	µg/L	<0.7	<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
235768	B1	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235769	B2	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235770	B3	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235771	E1	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235772	E2	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235773	E3	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235774	E4	OLCSCAN* - LC/MS Scan	05/07/2023	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).
235775	E5	OLCSCAN* - LC/MS Scan	05/07/2023	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

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The results in this report were authorised by:

<i>Name</i>	<i>Title</i>	<i>Area</i>
██████████	Senior Scientist	EXTERNAL
████████████████████	Scientist	INORGANIC
██████████	Scientist	ORGANIC