



Environmental Forensics Report of Analysis
Project 20230220

Report #: 1769
Date Issued: 28-Jul-2023
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Client Project Reference: Menindee Fish Kill - 40 (IMT 21 Jun

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 28 July 2023

Project Received: 23 June 2023

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



The following samples were analysed:

Sample ID	Client ID	Sample Type	Client Sampled Date/Time	Aliquot	Client Description
235461	E8	Liquid	21/06/2023 9:45AM		
235472	E8	Liquid	21/06/2023 9:45AM	Field Aliquot	
235483	E8	Liquid	21/06/2023 9:45AM	Field Aliquot	
235494	E8	Liquid	21/06/2023 9:45AM	Field Aliquot	
235505	E8	Liquid	21/06/2023 9:45AM	Field Aliquot	
235516	E8	Liquid	21/06/2023 9:45AM	Field Aliquot	
235462	E9	Liquid	21/06/2023 10:35AM		
235473	E9	Liquid	21/06/2023 10:35AM	Field Aliquot	
235484	E9	Liquid	21/06/2023 10:35AM	Field Aliquot	
235495	E9	Liquid	21/06/2023 10:35AM	Field Aliquot	
235506	E9	Liquid	21/06/2023 10:35AM	Field Aliquot	
235517	E9	Liquid	21/06/2023 10:35AM	Field Aliquot	
235463	E10	Liquid	21/06/2023 11:25AM		
235474	E10	Liquid	21/06/2023 11:25AM	Field Aliquot	
235485	E10	Liquid	21/06/2023 11:25AM	Field Aliquot	
235496	E10	Liquid	21/06/2023 11:25AM	Field Aliquot	
235507	E10	Liquid	21/06/2023 11:25AM	Field Aliquot	
235518	E10	Liquid	21/06/2023 11:25AM	Field Aliquot	
235464	E11	Liquid	21/06/2023 12:40PM		
235475	E11	Liquid	21/06/2023 12:40PM	Field Aliquot	
235486	E11	Liquid	21/06/2023 12:40PM	Field Aliquot	
235497	E11	Liquid	21/06/2023 12:40PM	Field Aliquot	
235508	E11	Liquid	21/06/2023 12:40PM	Field Aliquot	
235519	E11	Liquid	21/06/2023 12:40PM	Field Aliquot	
235465	E7	Liquid	21/06/2023 2:07PM		
235476	E7	Liquid	21/06/2023 2:07PM	Field Aliquot	
235487	E7	Liquid	21/06/2023 2:07PM	Field Aliquot	
235498	E7	Liquid	21/06/2023 2:07PM	Field Aliquot	
235509	E7	Liquid	21/06/2023 2:07PM	Field Aliquot	

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

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235520	E7	Liquid	21/06/2023	2:07PM	Field Aliquot	
235466	E6.5	Liquid	21/06/2023	2:44PM		
235477	E6.5	Liquid	21/06/2023	2:44PM	Field Aliquot	
235488	E6.5	Liquid	21/06/2023	2:44PM	Field Aliquot	
235499	E6.5	Liquid	21/06/2023	2:44PM	Field Aliquot	
235510	E6.5	Liquid	21/06/2023	2:44PM	Field Aliquot	
235521	E6.5	Liquid	21/06/2023	2:44PM	Field Aliquot	
235467	B4	Liquid	21/06/2023	3:40PM		
235478	B4	Liquid	21/06/2023	3:40PM	Field Aliquot	
235489	B4	Liquid	21/06/2023	3:40PM	Field Aliquot	
235500	B4	Liquid	21/06/2023	3:40PM	Field Aliquot	
235511	B4	Liquid	21/06/2023	3:40PM	Field Aliquot	
235522	B4	Liquid	21/06/2023	3:40PM	Field Aliquot	
235468	E6	Liquid	21/06/2023	3:58PM		
235479	E6	Liquid	21/06/2023	3:58PM	Field Aliquot	
235490	E6	Liquid	21/06/2023	3:58PM	Field Aliquot	
235501	E6	Liquid	21/06/2023	3:58PM	Field Aliquot	
235512	E6	Liquid	21/06/2023	3:58PM	Field Aliquot	
235523	E6	Liquid	21/06/2023	3:58PM	Field Aliquot	
235875	MFK-Z-B4-F1	Liquid	21/06/2023			Trip 12
235876	MFK-Z-E6-F1	Liquid	21/06/2023			Trip 12
235877	MFK-Z-E6.5-F1	Liquid	21/06/2023			Trip 12
235878	MFK-Z-E7-F1	Liquid	21/06/2023			Trip 12
235879	MFK-Z-E8-F1	Liquid	21/06/2023			Trip 12
235880	MFK-Z-E9-F1	Liquid	21/06/2023			Trip 12
235881	MFK-Z-E10-F1	Liquid	21/06/2023			Trip 12
235922	MFK-Z-B4-F2	Liquid	21/06/2023			
235923	MFK-Z-E6-F2	Liquid	21/06/2023			
235924	MFK-Z-E6.5-F2	Liquid	21/06/2023			
235925	MFK-Z-E7-F2	Liquid	21/06/2023			
235926	MFK-Z-E8-F2	Liquid	21/06/2023			

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235927	MFK-Z-E9-F2	Liquid	21/06/2023	
235928	MFK-Z-E10-F2	Liquid	21/06/2023	
235929	MFK-Z-B4-UNF	Liquid	21/06/2023	Trip 12
235930	MFK-Z-E6-UNF	Liquid	21/06/2023	Trip 12
235931	MFK-Z-E6.5-UNF	Liquid	21/06/2023	Trip 12
235932	MFK-Z-E7-UNF	Liquid	21/06/2023	Trip 12
235933	MFK-Z-E8-UNF	Liquid	21/06/2023	Trip 12
235934	MFK-Z-E9-UNF	Liquid	21/06/2023	Trip 12
235935	MFK-Z-E10-UNF	Liquid	21/06/2023	Trip 12

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 235875 to 235881 and 235922 to 235935 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of Nutrients: EK255A - Ammonia, EK259A - Nitrite and Nitrate (NO_x), EK271A - Reactive Phosphorus, EK262A - Total Nitrogen, EK267A - Total Phosphorus (Persulfate Digestion). This report summarises data from the attached external report: ES2321878, dated 07-Jul-2023.

· Samples 235516 to 235523 were sent to Sydney Water Laboratory Services (NATA Accreditation no: 63 and 610) for the analysis of Full Algal ID and Enumeration. Please see detailed results in the attached Phytoplankton Analysis Report no. 287711 dated 12 July 2023.
Samples 235494 to 235501 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: 287711 dated 12 July 2023, which gives Algal Toxins analysis results and the Full Algal ID and Enumeration summary results.

· Sample 235472 to 235479 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EP202A: Phenoxyacetic Acid Herbicides by LCMS, EP204 : Glyphosate and AMPA. This report summarises data from the attached external report: ES2321217, dated 3-Jul-2023.

· Samples 235461, 235462, 235463, 235464, 235465, 235466, 235467 and 235468 were analysed outside the method holding time for Total Suspended Solids.



Analysis Results - External Methods*		<i>Sample ID</i>	235494	235516	235495	235517	235496	235518	235497	235519	235498	235520	235499	235521
Area - EXTERNAL		<i>Start Date</i>	26/06/2023	10/07/2023	26/06/2023	10/07/2023	26/06/2023	10/07/2023	26/06/2023	10/07/2023	26/06/2023	10/07/2023	26/06/2023	10/07/2023
		<i>Client ID</i>	E8	E8	E9	E9	E10	E10	E11	E11	E7	E7	E6.5	E6.5
<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>	235500	235522	235501	235523
Area - EXTERNAL		<i>Start Date</i>	26/06/2023	10/07/2023	26/06/2023	10/07/2023
		<i>Client ID</i>	B4	B4	E6	E6
<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	235472	235473	235474	235475	235476	235477	235478	235479
		28/06/2023 E8	28/06/2023 E9	28/06/2023 E10	28/06/2023 E11	28/06/2023 E7	28/06/2023 E6.5	28/06/2023 B4	28/06/2023 E6
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	235875	235876	235877	235878	235879	235880	235881	235922	235923	235924	235925	235926
		3/07/2023 MFK-Z-B4-F 1	3/07/2023 MFK-Z-E6-F 1	3/07/2023 MFK-Z-E6.5- F1	3/07/2023 MFK-Z-E7-F 1	3/07/2023 MFK-Z-E8-F 1	3/07/2023 MFK-Z-E9-F 1	3/07/2023 MFK-Z-E10- F1	3/07/2023 MFK-Z-B4-F 2	3/07/2023 MFK-Z-E6-F 2	3/07/2023 MFK-Z-E6.5- F2	3/07/2023 MFK-Z-E7-F 2	3/07/2023 MFK-Z-E8-F 2
Ammonia as N	mg/L	0.030	0.008	0.006	0.432	0.051	0.019	0.014					
Dissolved Total Nitrogen as N	mg/L							0.66	0.82	0.86	1.62	0.84	
Dissolved Total Phosphorus as P	mg/L							0.264	0.033	0.188	0.277	0.174	
Nitrite+Nitrate as N	mg/L	0.002	0.006	0.009	0.088	0.074	0.092	0.084					
Reactive Phosphorus as P	mg/L	0.230	0.006	0.107	0.228	0.115	0.128	0.060					

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Analysis Results - External Methods*

Area - EXTERNAL

		235927	235928	235929	235930	235931	235932	235933	235934	235935
	Sample ID	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023	3/07/2023
	Start Date	MFK-Z-E9-F	MFK-Z-E10-F2	MFK-Z-B4-U	MFK-Z-E6-U	MFK-Z-E6.5-UNF	MFK-Z-E7-U	MFK-Z-E8-U	MFK-Z-E9-U	MFK-Z-E10-UNF
	Client ID	2								
Analyte										
Dissolved Total Nitrogen as N	mg/L	0.88	1.14							
Dissolved Total Phosphorus as P	mg/L	0.164	0.085							
Total Nitrogen as N	mg/L			0.70	0.93	1.01	1.85	0.91	0.96	1.40
Total Phosphorus as P	mg/L			0.273	0.061	0.245	0.330	0.184	0.182	0.166

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Analysis Results - ICVAASW
Area - INORGANIC

		Sample ID	235505	235506	235507	235508	235509	235510	235511	235512
		Start Date	18/07/2023	18/07/2023	18/07/2023	18/07/2023	18/07/2023	18/07/2023	18/07/2023	18/07/2023
		Client ID	E8	E9	E10	E11	E7	E6.5	B4	E6
Analyte										
Mercury	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES
Area - INORGANIC

		Sample ID	235505	235506	235507	235508	235509	235510	235511	235512
		Start Date	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023
		Client ID	E8	E9	E10	E11	E7	E6.5	B4	E6
Analyte										
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		0.11	0.11	0.10	0.10	0.08	0.08	0.10	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		37	36	34	34	30	32	36	34
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		15	16	16	16	14	17	13	14
Potassium (Lab. filtered)	mg/L		12	12	12	13	13	15	13	12
Sodium (Lab. filtered)	mg/L		45	45	51	50	49	55	42	43
Strontium (Lab. filtered)	mg/L		0.37	0.37	0.37	0.37	0.33	0.38	0.35	0.36
Sulfur (Lab. filtered)	mg/L		3.8	3.5	3.1	3.0	4.3	4.4	4.5	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

	Sample ID	235505	235506	235507	235508	235509	235510	235511	235512
	Start Date	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023
	Client ID	E8	E9	E10	E11	E7	E6.5	B4	E6
Analyte									
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	0.004	0.005	0.005	0.005	0.007	0.007	0.006	0.003
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	0.0004	0.0004	0.0004	0.0004	<0.0001	0.0003
Copper (Lab. filtered)	mg/L	0.0023	0.0023	0.0022	0.0020	0.0017	0.0020	0.0025	0.0016
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	0.0016	0.0016	0.0020	0.0019	0.0022	0.0025	0.0019	0.0019
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	0.0012	0.0011	0.0014	0.0015	0.0012	0.0014	0.0014	0.0013
Nickel (Lab. filtered)	mg/L	0.0031	0.0033	0.0033	0.0034	0.0022	0.0019	0.0023	0.0023
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	0.013	0.013	0.011	0.011	0.022	0.022	0.021	0.010
Zinc (Lab. filtered)	mg/L	<0.001	<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>	235505	235506	235507	235508	235509	235510	235511	235512
	<i>Start Date</i>	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023	26/06/2023
	<i>Client ID</i>	E8	E9	E10	E11	E7	E6.5	B4	E6
<i>Analyte</i>									
Aluminium (acid extractable)	mg/L	4.8	5.3	4.7	4.2	4.0	3.1	2.4	2.5
Barium (acid extractable)	mg/L	0.13	0.12	0.13	0.12	0.10	0.11	0.12	0.13
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	37	36	36	34	30	35	38	36
Iron (acid extractable)	mg/L	3.7	4.1	3.7	3.4	3.0	2.3	1.9	1.9
Magnesium (acid extractable)	mg/L	16	16	18	17	15	18	15	16
Manganese (acid extractable)	mg/L	0.08	0.11	0.13	0.13	0.10	0.08	0.02	0.05
Potassium (acid extractable)	mg/L	13	13	14	14	14	16	14	14
Sodium (acid extractable)	mg/L	45	45	53	51	49	58	45	45
Strontium (acid extractable)	mg/L	0.38	0.37	0.40	0.38	0.34	0.41	0.38	0.39
Sulfur (acid extractable)	mg/L	3.8	3.5	3.2	3.0	4.3	4.6	4.6	4.4
Titanium (acid extractable)	mg/L	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.01

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Analysis Results - ICPMS

Area - INORGANIC

Analyte

		Sample ID Start Date Client ID	235505 26/06/2023 E8	235506 26/06/2023 E9	235507 26/06/2023 E10	235508 26/06/2023 E11	235509 26/06/2023 E7	235510 26/06/2023 E6.5	235511 26/06/2023 B4	235512 26/06/2023 E6
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		0.004	0.005	0.005	0.005	0.007	0.007	0.006	0.003
Beryllium (acid extractable)	mg/L		0.0001	0.0002	0.0001	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		0.004	0.005	0.005	0.004	0.004	0.003	0.002	0.002
Cobalt (acid extractable)	mg/L		0.0016	0.0019	0.0021	0.0020	0.0020	0.0013	0.0007	0.0011
Copper (acid extractable)	mg/L		0.0048	0.0051	0.0047	0.0046	0.0042	0.0042	0.0041	0.0030
Lead (acid extractable)	mg/L		0.0011	0.0013	0.0011	0.0011	0.0012	0.0009	0.0004	0.0006
Lithium (acid extractable)	mg/L		0.0031	0.0033	0.0032	0.0031	0.0034	0.0034	0.0028	0.0026
Molybdenum (acid extractable)	mg/L		0.0015	0.0014	0.0016	0.0015	0.0015	0.0016	0.0015	0.0015
Nickel (acid extractable)	mg/L		0.0059	0.0067	0.0068	0.0064	0.0052	0.0043	0.0039	0.0040
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	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium (acid extractable)	mg/L		0.020	0.021	0.019	0.018	0.029	0.026	0.025	0.014
Zinc (acid extractable)	mg/L		0.008	0.009	0.007	0.007	0.007	0.010	0.005	0.004

Analysis Results - IGRSS

Area - INORGANIC

Analyte

		Sample ID Start Date Client ID	235461 21/07/2023 E8	235462 21/07/2023 E9	235463 21/07/2023 E10	235464 25/07/2023 E11	235465 21/07/2023 E7	235466 21/07/2023 E6.5	235467 21/07/2023 B4	235468 21/07/2023 E6
Fixed Suspended Solids	mg/L		27	46	57	49	39	21	9	34
Total Suspended Solids	mg/L		33	54	70	61	50	31	12	42
Volatile Suspended Solids	mg/L		6	8	13	12	10	10	<5	9

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Analysis Results - QQPEST

Area - ORGANIC

Analyte	Sample ID Start Date Client ID	235483	235484	235485	235486	235487	235488	235489	235490
		27/06/2023 E8	27/06/2023 E9	27/06/2023 E10	27/06/2023 E11	27/06/2023 E7	27/06/2023 E6.5	27/06/2023 B4	27/06/2023 E6
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	235483	235484	235485	235486	235487	235488	235489	235490
		27/06/2023 E8	27/06/2023 E9	27/06/2023 E10	27/06/2023 E11	27/06/2023 E7	27/06/2023 E6.5	27/06/2023 B4	27/06/2023 E6
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	<0.5	<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	<0.4
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
235483	E8	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235484	E9	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235485	E10	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235486	E11	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235487	E7	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235488	E6.5	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235489	B4	OLCSCAN* - LC/MS Scan	26/06/2023	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).
235490	E6	OLCSCAN* - LC/MS Scan	26/06/2023	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:

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