



Environmental Forensics Report of Analysis
Project 20230194

Report #: 1730
Date Issued: 19-Jul-2023
Page 1 of 15

Client Project Reference: Menindee Fish Kill - 33 (IMT 31 May

Customer: Department of Planning & Environment

Attention: [REDACTED]

Report Date: 19 July 2023

Project Received: 02 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
234494	E8	Liquid	31/05/2023 9:47AM		
234501	E8	Liquid	31/05/2023 9:47AM	Field Aliquot	
234502	E8	Liquid	31/05/2023 9:47AM	Laboratory Aliquot	
234503	E8	Liquid	31/05/2023 9:47AM	Field Aliquot	
234504	E8	Liquid	31/05/2023 9:47AM	Field Aliquot	
234554	E8	Liquid	31/05/2023 9:47AM	Laboratory Aliquot	
234495	E9	Liquid	31/05/2023 10:35AM		
234505	E9	Liquid	31/05/2023 10:35AM	Field Aliquot	
234506	E9	Liquid	31/05/2023 10:35AM	Laboratory Aliquot	
234507	E9	Liquid	31/05/2023 10:35AM	Field Aliquot	
234508	E9	Liquid	31/05/2023 10:35AM	Field Aliquot	
234555	E9	Liquid	31/05/2023 10:35AM	Laboratory Aliquot	
234496	E10	Liquid	31/05/2023 11:30AM		
234509	E10	Liquid	31/05/2023 11:30AM	Field Aliquot	
234510	E10	Liquid	31/05/2023 11:30AM	Laboratory Aliquot	
234511	E10	Liquid	31/05/2023 11:30AM	Field Aliquot	
234512	E10	Liquid	31/05/2023 11:30AM	Field Aliquot	
234556	E10	Liquid	31/05/2023 11:30AM	Laboratory Aliquot	
234497	E6	Liquid	31/05/2023 1:44PM		
234513	E6	Liquid	31/05/2023 1:44PM	Field Aliquot	
234514	E6	Liquid	31/05/2023 1:44PM	Laboratory Aliquot	
234515	E6	Liquid	31/05/2023 1:44PM	Field Aliquot	
234516	E6	Liquid	31/05/2023 1:44PM	Field Aliquot	
234557	E6	Liquid	31/05/2023 1:44PM	Laboratory Aliquot	
234498	B4	Liquid	31/05/2023 2:23PM		
234517	B4	Liquid	31/05/2023 2:23PM	Field Aliquot	
234518	B4	Liquid	31/05/2023 2:23PM	Laboratory Aliquot	
234519	B4	Liquid	31/05/2023 2:23PM	Field Aliquot	
234520	B4	Liquid	31/05/2023 2:23PM	Field Aliquot	

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: SN = Sample Note

RN = Result Note

RC = Project Comment



234558	B4	Liquid	31/05/2023	2:23PM	Laboratory Aliquot	
234499	E6.5	Liquid	31/05/2023	3:06PM		
234521	E6.5	Liquid	31/05/2023	3:06PM	Field Aliquot	
234522	E6.5	Liquid	31/05/2023	3:06PM	Laboratory Aliquot	
234523	E6.5	Liquid	31/05/2023	3:06PM	Field Aliquot	
234524	E6.5	Liquid	31/05/2023	3:06PM	Field Aliquot	
234559	E6.5	Liquid	31/05/2023	3:06PM	Laboratory Aliquot	
234500	E7	Liquid	31/05/2023	3:45PM		
234525	E7	Liquid	31/05/2023	3:45PM	Field Aliquot	
234526	E7	Liquid	31/05/2023	3:45PM	Laboratory Aliquot	
234527	E7	Liquid	31/05/2023	3:45PM	Field Aliquot	
234528	E7	Liquid	31/05/2023	3:45PM	Field Aliquot	
234560	E7	Liquid	31/05/2023	3:45PM	Laboratory Aliquot	
235321	B4 Filtered 1	Liquid	31/05/2023			Trip 9
235322	B4 Unfiltered	Liquid	31/05/2023			Trip 9
235323	E6 Filtered 1	Liquid	31/05/2023			Trip 9
235324	E6 Filtered 2	Liquid	31/05/2023			Trip 9
235325	E6 Unfiltered	Liquid	31/05/2023			Trip 9
235326	E6.5 Filtered 1	Liquid	31/05/2023			Trip 9
235327	E6.5 Filtered 2	Liquid	31/05/2023			Trip 9
235328	E6.5 Unfiltered	Liquid	31/05/2023			Trip 9
235329	E7 Filtered 1	Liquid	31/05/2023			Trip 9
235330	E7 Filtered 2	Liquid	31/05/2023			Trip 9
235331	E7 Unfiltered	Liquid	31/05/2023			Trip 9
235332	E8 Filtered 1	Liquid	31/05/2023			Trip 9
235333	E8 Filtered 2	Liquid	31/05/2023			Trip 9
235334	E8 Unfiltered	Liquid	31/05/2023			Trip 9
235335	E9 Filtered 1	Liquid	31/05/2023			Trip 9
235336	E9 Filtered 2	Liquid	31/05/2023			Trip 9
235337	E9 Unfiltered	Liquid	31/05/2023			Trip 9
235338	E10 Filtered 1	Liquid	31/05/2023			Trip 9

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235339	E10 Filtered 2	Liquid	31/05/2023	Trip 9
235340	E10 Unfiltered	Liquid	31/05/2023	Trip 9

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 234502, 234506, 234510, 234514, 234518, 234522, 234526 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: ES2318695, dated 09-Jun-2023.

· Samples 234504, 234508, 234512, 234516, 234520, 234524 and 234528 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. 286659 dated 22 June 2023. Samples 234554 to 234560 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: 286659 dated 22 June 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.

· Samples 235321 to 235340 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EK255A: Ammonia, EK259A: Nitrite and Nitrate (NO_x), EK261A: Total Kjeldahl Nitrogen, EK262A: Total Nitrogen, EK267A: Total Phosphorus (Persulfate Digestion), EK271A: Reactive Phosphorus. This report summarises data from the attached external report: ES2320686, dated 28-Jun-2023.

· Samples 234501, 234505, 234509, 234513, 234517, 234521 and 234525 were analysed outside the method holding time for Total suspended solids



Analysis Results - External Methods*		<i>Sample ID</i>	234504	234554	234508	234555	234512	234556	234516	234557	234520	234558	234524	234559
Area - EXTERNAL		<i>Start Date</i>	21/01/2023	9/06/2023	21/01/2023	9/06/2023	21/01/2023	9/06/2023	21/01/2023	9/06/2023	21/01/2023	9/06/2023	21/01/2023	9/06/2023
		<i>Client ID</i>	E8	E8	E9	E9	E10	E10	E6	E6	B4	B4	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>	234528	234560
Area - EXTERNAL		<i>Start Date</i>	21/01/2023	9/06/2023
		<i>Client ID</i>	E7	E7
<i>Analyte</i>				
Algal Enumeration	-		RC	
Algal Identification	-		RC	
Algal Toxins	-			RC

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Analysis Results - External Methods*

Area - EXTERNAL

		Sample ID	234502	234506	234510	234514	234518	234522	234526
		Start Date	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023
		Client ID	E8	E9	E10	E6	B4	E6.5	E7
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	235321	235322	235323	235324	235325	235326	235327	235328	235329	235330	235331	235332
		Start Date	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023
		Client ID	B4 Filtered 1	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	E8 Filtered 1
Analyte														
Ammonia as N	mg/L		0.008		0.007			0.013			0.274			0.072
Nitrite+Nitrate as N	mg/L		0.006	0.004	0.005	0.002	0.003	0.008	0.007	0.004	0.020	0.017	0.019	0.042
Reactive Phosphate	mg/L		0.601		0.020			0.532			0.577			0.381
Total Kjeldahl Nitrogen as N	mg/L			0.69		0.91	1.72		0.79	1.18		1.07	1.41	
Total Nitrogen as N	mg/L			0.69		0.91	1.72		0.80	1.18		1.09	1.43	
Total Phosphorus as P	mg/L			0.308		0.040	0.134		0.277	0.322		0.280	0.362	

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Analysis Results - External Methods*

Area - EXTERNAL

Analyte

	<i>Sample ID</i>	235333	235334	235335	235336	235337	235338	235339	235340
	<i>Start Date</i>	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023	23/06/2023
	<i>Client ID</i>	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			0.074			0.079		
Nitrite+Nitrate as N	mg/L	0.038	0.040	0.051	0.047	0.050	0.071	0.067	0.062
Reactive Phosphate	mg/L			0.383			0.279		
Total Kjeldahl Nitrogen as N	mg/L	0.77	1.08		0.77	1.12		0.94	1.44
Total Nitrogen as N	mg/L	0.81	1.12		0.82	1.17		1.01	1.50
Total Phosphorus as P	mg/L	0.144	0.322		0.142	0.353		0.166	0.317

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Analysis Results - ICVAASW

Area - INORGANIC

Analyte

		234503	234507	234511	234515	234519	234523	234527
		19/06/2023	19/06/2023	19/06/2023	19/06/2023	19/06/2023	19/06/2023	19/06/2023
		E8	E9	E10	E6	B4	E6.5	E7
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES

Area - INORGANIC

Analyte

		234503	234507	234511	234515	234519	234523	234527
		5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023
		E8	E9	E10	E6	B4	E6.5	E7
Aluminium (Lab. filtered)	mg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Barium (Lab. filtered)	mg/L	0.11	0.11	0.11	0.12	0.10	0.08	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	34	33	32	34	28	35
Iron (Lab. filtered)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (Lab. filtered)	mg/L	15	15	15	14	13	15	14
Potassium (Lab. filtered)	mg/L	12	12	12	13	12	14	13
Sodium (Lab. filtered)	mg/L	41	41	44	45	40	51	44
Strontium (Lab. filtered)	mg/L	0.35	0.35	0.36	0.40	0.35	0.34	0.36
Sulfur (Lab. filtered)	mg/L	3.3	3.3	2.9	4.0	4.1	4.0	4.2
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>	234503	234507	234511	234515	234519	234523	234527
	<i>Start Date</i>	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023
	<i>Client ID</i>	E8	E9	E10	E6	B4	E6.5	E7
Antimony (Lab. filtered)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L	0.005	0.005	0.005	0.004	0.007	0.007	0.007
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	0.0002	0.0002	0.0003	0.0005	<0.0001	0.0003	0.0002
Copper (Lab. filtered)	mg/L	0.0023	0.0022	0.0022	0.0018	0.0023	0.0018	0.0020
Lead (Lab. filtered)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium (Lab. filtered)	mg/L	0.0017	0.0017	0.0019	0.0021	0.0021	0.0027	0.0022
Manganese (Lab. filtered)	mg/L	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L	0.0012	0.0013	0.0014	0.0016	0.0014	0.0013	0.0014
Nickel (Lab. filtered)	mg/L	0.0030	0.0031	0.0032	0.0024	0.0021	0.0018	0.0024
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	0.012	0.013	0.011	0.012	0.019	0.022	0.021
Zinc (Lab. filtered)	mg/L	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.001

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Analysis Results - ICPAES

Area - INORGANIC

<i>Sample ID</i>	<i>Start Date</i>	<i>Client ID</i>	234503	234507	234511	234515	234519	234523	234527
			5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023	5/06/2023
			E8	E9	E10	E6	B4	E6.5	E7

<i>Analyte</i>									
Aluminium (acid extractable)	mg/L	6.3	6.4	6.1	1.9	2.8	2.7	5.1	
Barium (acid extractable)	mg/L	0.14	0.14	0.14	0.14	0.12	0.10	0.12	
Boron (acid extractable)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Calcium (acid extractable)	mg/L	37	36	36	33	36	30	36	
Iron (acid extractable)	mg/L	4.5	4.5	4.7	1.3	1.8	1.9	3.6	
Magnesium (acid extractable)	mg/L	16	16	17	15	14	17	16	
Manganese (acid extractable)	mg/L	0.11	0.12	0.15	0.13		0.06	0.07	
Potassium (acid extractable)	mg/L	13	13	14	13	13	15	14	
Sodium (acid extractable)	mg/L	42	43	46	46	41	53	44	
Strontium (acid extractable)	mg/L	0.38	0.38	0.39	0.42	0.36	0.37	0.37	
Sulfur (acid extractable)	mg/L	3.4	3.4	3.1	4.3	4.2	4.3	4.2	
Titanium (acid extractable)	mg/L	0.10	0.11	0.09	0.03	0.07	0.04	0.08	

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RC = Project Comment



Analysis Results - ICPMS

Area - INORGANIC

Sample ID	Start Date	Client ID	234503 5/06/2023 E8	234507 5/06/2023 E9	234511 5/06/2023 E10	234515 5/06/2023 E6	234519 5/06/2023 B4	234523 5/06/2023 E6.5	234527 5/06/2023 E7
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Analyte		234503 5/06/2023 E8	234507 5/06/2023 E9	234511 5/06/2023 E10	234515 5/06/2023 E6	234519 5/06/2023 B4	234523 5/06/2023 E6.5	234527 5/06/2023 E7
Antimony (acid extractable)	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L	0.005	0.005	0.005	0.004	0.007	0.007	0.007
Beryllium (acid extractable)	mg/L	0.0002	0.0002	0.0002	<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
Chromium (acid extractable)	mg/L	0.006	0.006	0.006	0.002	0.002	0.003	0.005
Cobalt (acid extractable)	mg/L	0.0020	0.0020	0.0023	0.0015	0.0005	0.0011	0.0016
Copper (acid extractable)	mg/L	0.0056	0.0056	0.0055	0.0035	0.0037	0.0040	0.0049
Lead (acid extractable)	mg/L	0.0017	0.0017	0.0019	0.0009	0.0007	0.0010	0.0015
Lithium (acid extractable)	mg/L	0.0035	0.0035	0.0036	0.0025	0.0028	0.0034	0.0035
Manganese (acid extractable)	mg/L					0.017		
Molybdenum (acid extractable)	mg/L	0.0014	0.0014	0.0014	0.0017	0.0015	0.0016	0.0014
Nickel (acid extractable)	mg/L	0.0068	0.0067	0.0072	0.0040	0.0037	0.0040	0.0055
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	0.022	0.021	0.016	0.023	0.027	0.028
Zinc (acid extractable)	mg/L	0.010	0.009	0.010	0.004	0.004	0.005	0.008

Analysis Results - IGRSS

Area - INORGANIC

Sample ID	Start Date	Client ID	234501 12/07/2023 E8	234505 8/06/2023 E9	234509 8/06/2023 E10	234513 8/06/2023 E6	234517 8/06/2023 B4	234521 8/06/2023 E6.5	234525 8/06/2023 E7
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Analyte		234501 12/07/2023 E8	234505 8/06/2023 E9	234509 8/06/2023 E10	234513 8/06/2023 E6	234517 8/06/2023 B4	234521 8/06/2023 E6.5	234525 8/06/2023 E7
Fixed Suspended Solids	mg/L	16	50	70	29	24	34	65
Total Suspended Solids	mg/L	32	58	81	43	29	47	76
Volatile Suspended Solids	mg/L	16	8	11	14	5	13	11

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Analysis Results - QQPEST

Area - ORGANIC

	Sample ID	234494	234495	234496	234497	234498	234499	234500
	Start Date	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023	6/06/2023
	Client ID	E8	E9	E10	E6	B4	E6.5	E7
Analyte								
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	234494	234495	234496	234497	234498	234499	234500
		6/06/2023 E8	6/06/2023 E9	6/06/2023 E10	6/06/2023 E6	6/06/2023 B4	6/06/2023 E6.5	6/06/2023 E7
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
234494	E8	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234495	E9	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234496	E10	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234497	E6	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234498	B4	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234499	E6.5	OLCSCAN* - LC/MS Scan	05/06/2023	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).
234500	E7	OLCSCAN* - LC/MS Scan	05/06/2023	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:

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