Environmental Forensics Report of Analysis

Project 20230134

Client Project Reference: Menindee Fish Kill 10 (IMT 26 April

Report Date: 18 May 2023

Customer: Department of Planning & Environment

Project Received:30 April 2023

Attention: [redacted]

EF Project Contact: [redacted]

Environmental Forensics
Department of Planning and Environment
Dharug Country
480 Weeroona Road, Lidcombe NSW 2141

The following samples were analysed:

Sample ID	*Client ID*	*Sample Type*	*Client Sampled Date/Time*	*Aliquot*
232643	B1	Liquid	26/04/2023 11:45AM	
232651	B1	Liquid	26/04/2023 11:45AM	Field Aliquot
232652	B1	Liquid	26/04/2023 11:45AM	Field Aliquot
232653	B1	Liquid	26/04/2023 11:45AM	Field Aliquot
232654	B1	Liquid	26/04/2023 11:45AM	Laboratory Aliquot
232644	B2	Liquid	26/04/2023 12:40PM	
232655	B2	Liquid	26/04/2023 12:40PM	Field Aliquot
232656	B2	Liquid	26/04/2023 12:40PM	Field Aliquot
232657	B2	Liquid	26/04/2023 12:40PM	Field Aliquot
232658	B2	Liquid	26/04/2023 12:40PM	Laboratory Aliquot
232645	E1	Liquid	26/04/2023 1:15PM	
232659	E1	Liquid	26/04/2023 1:15PM	Field Aliquot
232660	E1	Liquid	26/04/2023 1:15PM	Field Aliquot
232661	E1	Liquid	26/04/2023 1:15PM	Field Aliquot
232662	E1	Liquid	26/04/2023 1:15PM	Laboratory Aliquot
232646	E2	Liquid	26/04/2023 2:05PM	
232663	E2	Liquid	26/04/2023 2:05PM	Field Aliquot
232664	E2	Liquid	26/04/2023 2:05PM	Field Aliquot
232665	E2	Liquid	26/04/2023 2:05PM	Field Aliquot
232666	E2	Liquid	26/04/2023 2:05PM	Laboratory Aliquot
232647	E3	Liquid	26/04/2023 2:45PM	
232667	E3	Liquid	26/04/2023 2:45PM	Field Aliquot
232668	E3	Liquid	26/04/2023 2:45PM	Field Aliquot
232669	E3	Liquid	26/04/2023 2:45PM	Field Aliquot
232670	E3	Liquid	26/04/2023 2:45PM	Laboratory Aliquot
232648	E4	Liquid	26/04/2023 3:35PM	
232671	E4	Liquid	26/04/2023 3:35PM	Field Aliquot
232672	E4	Liquid	26/04/2023 3:35PM	Field Aliquot
232673	E4	Liquid	26/04/2023 3:35PM	Field Aliquot

Tests not covered by NATA accreditation 3040 are denoted with *
Codes: **SN =** Sample Note **RN =** Result Note **RC =** Project Comment

232674	E4	Liquid	26/04/2023	3:35PM	Laboratory Aliquot
232649	E5	Liquid	26/04/2023	4:05PM	
232675	E5	Liquid	26/04/2023	4:05PM	Field Aliquot
232676	E5	Liquid	26/04/2023	4:05PM	Field Aliquot
232677	E5	Liquid	26/04/2023	4:05PM	Field Aliquot
232678	E5	Liquid	26/04/2023	4:05PM	Laboratory Aliquot
232650	B3	Liquid	26/04/2023	3:45PM	
232679	B3	Liquid	26/04/2023	3:45PM	Field Aliquot
232680	B3	Liquid	26/04/2023	3:45PM	Field Aliquot
232681	B3	Liquid	26/04/2023	3:45PM	Field Aliquot
232682	B3	Liquid	26/04/2023	3:45PM	Laboratory Aliquot
233042	E5 MFK-Z-8_20230426	Liquid	26/04/2023		

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.

·Solid samples are reported on a dry weight basis and biota samples are reported on an as received basis unless specified otherwise.

Project Comments

·Samples 232651, 232655, 232659, 232663, 232667, 232671, 232675, 232679 were sent to ALS Environmental Laboratory (NATA Accreditation no: 825) for the analysis of EK055G: Ammonia as N by Discrete Analyser, EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser, EK061G: Total Kjeldahl Nitrogen By Discrete Analyser, EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser, EK067G: Total Phosphorus as P by Discrete Analyser, EK071G: Reactive Phosphorus as P by discrete analyser, EP202A: Phenoxyacetic Acid Herbicides by LCMS, EP202S: Phenoxyacetic Acid Herbicide Surrogate, EP204: Glyphosate and AMPA. This report summarises data from the attached external report: ES2314136, dated 03-May-2023.

·Samples 232653, 232657, 232661, 232665, 232669, 232673, 232677 and 232681 were sent to Sydney Water Services (NATA Accreditation no: 56) for Blue-Green Algal ID and Enumeration analyses. Please see detailed results in the attached Phytoplankton Analysis Report no. 284604 dated 16 May 2023.
Samples 232654, 232658, 232662, 232666, 232670, 232674, 232678 and 232682 were also sent to Sydney Water Laboratory Services for the analysis of Agal Toxins. Please see the attached Analytical Report no. 284604 dated 16 May 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.

·The sample was analysed outside the method holding time for TSS analysis.

Analysis Results - External Methods*
Area - EXTERNAL

Analyte		Sample ID	232653	232654	232657	232658	232661	232662	232665	232666	232669	232670	232673	232674
		Start Date	15/05/2023	2/05/2023	15/05/2023	2/05/2023	15/05/2023	2/05/2023	15/05/2023	2/05/2023	15/05/2023	2/05/2023	15/05/2023	2/05/2023
		Client ID	B1	B1	B2	B2	E1	E1	E2	E2	E3	E3	E4	E4
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*
Area - EXTERNAL

Analyte		Sample ID	232677	232678	232681	232682
		Start Date	15/05/2023	2/05/2023	15/05/2023	2/05/2023
		Client ID	E5	E5	B3	B3
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	232651	232655	232659	232663	232667	232671	232675	232679
		Start Date	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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
Ammonia as N	mg/L		0.05	0.03	0.04	0.05	0.01	0.03	0.04	0.02
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
Nitrite+Nitrate as N	mg/L		0.01	0.01	0.01	<0.01	0.01	0.02	0.04	0.03
Picloram	µg/L		<10	<10	<10	<10	<10	<10	<10	<10
Reactive Phosphorus as P	mg/L		<0.01	0.01	0.01	0.01	0.02	0.02	0.12	0.22
Silvex (2,4,5-TP/Fenoprop)	µg/L		<10	<10	<10	<10	<10	<10	<10	<10
Total Kjeldahl Nitrogen as N	mg/L		1.5	1.5	1.8	1.8	1.6	1.8	1.6	1
Total Nitrogen as N	mg/L		1.5	1.5	1.8	1.8	1.6	1.8	1.6	1
Total Phosphorus as P	mg/L		0.11	0.17	0.2	0.23	0.18	0.2	0.27	0.35
Triclopyr	µg/L		<10	<10	<10	<10	<10	<10	<10	<10

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Analysis Results - ICVAASW
Area - INORGANIC

Analyte		Sample ID	232652	232656	232660	232664	232668	232672	232676	232680
		Start Date	28/04/2023	28/04/2023	28/04/2023	28/04/2023	28/04/2023	28/04/2023	28/04/2023	28/04/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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		Sample ID	232652	232656	232660	232664	232668	232672	232676	232680
		Start Date	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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		0.12	0.12	0.13	0.12	0.12	0.12	0.11	0.09
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		35	37	37	36	36	36	32	28
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		21	19	19	18	18	18	15	12
Potassium (Lab. filtered)	mg/L		11	11	11	12	12	12	11	11
Sodium (Lab. filtered)	mg/L		55	52	52	50	48	49	42	33
Strontium (Lab. filtered)	mg/L		0.43	0.43	0.42	0.41	0.41	0.41	0.36	0.29
Sulfur (Lab. filtered)	mg/L		4.3	4.1	4.1	3.8	3.7	3.8	3.6	3.3
Titanium (Lab. filtered)	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Analysis Results - ICPMS
Area - INORGANIC

Analyte		Sample ID	232652	232656	232660	232664	232668	232672	232676	232680
		Start Date	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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		0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.006
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	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001
Copper (Lab. filtered)	mg/L		0.0011	0.0012	0.0013	0.0013	0.0013	0.0011	0.0018	0.0028
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		0.0019	0.0018	0.0018	0.0018	0.0018	0.0018	0.0016	0.0015
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		0.0015	0.0015	0.0015	0.0016	0.0016	0.0015	0.0012	0.0010
Nickel (Lab. filtered)	mg/L		0.0025	0.0029	0.0028	0.0031	0.0030	0.0030	0.0027	0.0022
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		0.0050	0.0045	0.0043	0.0054	0.0056	0.0049	0.011	0.019
Zinc (Lab. filtered)	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Analysis Results - ICPAES

Area - INORGANIC

Analyte		Sample ID	232652	232656	232660	232664	232668	232672	232676	232680
		Start Date	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
Aluminium (acid extractable)	mg/L		0.52	1.6	1.3	1.3	1.1	1.3	2.8	4.4
Barium (acid extractable)	mg/L		0.14	0.15	0.15	0.14	0.14	0.14	0.13	0.12
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		36	38	40	39	37	38	34	30
Iron (acid extractable)	mg/L		0.6	1.6	1.3	1.3	1.1	1.4	2.7	4.3
Magnesium (acid extractable)	mg/L		21	19	20	19	18	19	16	13
Manganese (acid extractable)	mg/L		0.12	0.15	0.13	0.13	0.11	0.13	0.10	0.06
Potassium (acid extractable)	mg/L		12	12	12	13	13	13	12	12
Sodium (acid extractable)	mg/L		55	51	53	51	48	50	42	35
Strontium (acid extractable)	mg/L		0.45	0.43	0.45	0.44	0.42	0.43	0.38	0.31
Sulfur (acid extractable)	mg/L		4.4	4.0	4.2	3.9	3.7	3.9	3.7	3.4
Titanium (acid extractable)	mg/L		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02

Analysis Results - ICPMS

Area - INORGANIC

Analyte		Sample ID	232652	232656	232660	232664	232668	232672	232676	232680
		Start Date	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023	1/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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		0.002	0.003	0.003	0.003	0.003	0.003	0.004	0.006
Beryllium (acid extractable)	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0002
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	0.002	0.002	0.002	0.001	0.002	0.003	0.005
Cobalt (acid extractable)	mg/L		0.0012	0.0015	0.0014	0.0014	0.0012	0.0014	0.0016	0.0017
Copper (acid extractable)	mg/L		0.0021	0.0026	0.0025	0.0026	0.0025	0.0025	0.0039	0.0091
Lead (acid extractable)	mg/L		0.0005	0.0009	0.0008	0.0012	0.0007	0.0010	0.0011	0.0015
Lithium (acid extractable)	mg/L		0.0020	0.0022	0.0022	0.0025	0.0021	0.0022	0.0025	0.0029
Molybdenum (acid extractable)	mg/L		0.0015	0.0015	0.0015	0.0018	0.0016	0.0015	0.0012	0.0010
Nickel (acid extractable)	mg/L		0.0036	0.0046	0.0044	0.0043	0.0042	0.0044	0.0053	0.0061
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		0.0082	0.0099	0.010	0.010	0.0097	0.010	0.018	0.027
Zinc (acid extractable)	mg/L		0.003	0.005	0.004	0.004	0.008	0.005	0.007	0.009

Analysis Results - IGRTSS

Area - INORGANIC

Analyte		Sample ID	233042
		Start Date	11/05/2023
		Client ID	E5 MFK-Z-8 _20230426
Fixed Suspended Solids	mg/L		28
Total Suspended Solids	mg/L		37
Volatile Suspended Solids	mg/L		9

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Analysis Results - QQQPEST
Area - ORGANIC

Analyte		Sample ID	232643	232644	232645	232646	232647	232648	232649	232650
		Start Date	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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 - QQQPEST
Area - ORGANIC

Analyte		Sample ID	232643	232644	232645	232646	232647	232648	232649	232650
		Start Date	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023	2/05/2023
		Client ID	B1	B2	E1	E2	E3	E4	E5	B3
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
Terbuthylazine	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
232643	B1	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232644	B2	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232645	E1	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232646	E2	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232647	E3	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232648	E4	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232649	E5	OLCSCAN* - LC/MS Scan	05/05/2023	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).
232650	B3	OLCSCAN* - LC/MS Scan	05/05/2023	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
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
	Scientist	INORGANIC
	Scientist	ORGANIC

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