Environmental Forensics Report of Analysis

Project 20230175

Report #: ***1703***

Date Issued: 06-Jul-2023

Client Project Reference: Menindee Fish Kill - 28 (18 May 202

Report Date: 06 July 2023

Customer: Department of Planning & Environment

Project Received:19 May 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*
233898	E11	Liquid	18/05/2023 2:30PM	
233903	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233908	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233913	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233918	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233923	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233928	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233929	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233930	E11	Liquid	18/05/2023 2:30PM	Field Aliquot
233899	E12	Liquid	18/05/2023 9:30AM	
233904	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233909	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233914	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233919	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233924	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233931	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233932	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233933	E12	Liquid	18/05/2023 9:30AM	Field Aliquot
233900	E13	Liquid	18/05/2023 12:40PM	
233905	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233910	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233915	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233920	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233925	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233934	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233935	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233936	E13	Liquid	18/05/2023 12:40PM	Field Aliquot
233901	E14	Liquid	18/05/2023 11:40AM	
233906	E14	Liquid	18/05/2023 11:40AM	Field Aliquot

233911	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233916	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233921	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233926	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233937	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233938	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233939	E14	Liquid	18/05/2023	11:40AM	Field Aliquot
233902	E15	Liquid	18/05/2023	10:40AM	
233907	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233912	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233917	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233922	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233927	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233940	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233941	E15	Liquid	18/05/2023	10:40AM	Field Aliquot
233942	E15	Liquid	18/05/2023	10:40AM	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 233928 to 233942 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: ES2317065, dated 30-May-2023.
Samples 233898 to 233902 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: ES2317065, dated 30-May-2023.

·Samples 233918 to 233922 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. 285930 dated 9 June 2023.
Samples 233908 to 233912 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: 285930 dated 9 June 2023, which gives Algal Toxins analysis results and the Blue-Green Algal ID and Enumeration summary results.

Analysis Results - External Methods*
Area - EXTERNAL

Analyte		*Sample ID* / *Start Date* / *Client ID*	233908 29/05/2023 E11	233918 7/06/2023 E11	233909 29/05/2023 E12	233919 7/06/2023 E12	233910 29/05/2023 E13	233920 7/06/2023 E13	233911 29/05/2023 E14	233921 7/06/2023 E14	233912 29/05/2023 E15	233922 7/06/2023 E15
Algal Enumeration	-			RC		RC		RC		RC		RC
Algal Identification	-			RC		RC		RC		RC		RC
Algal Toxins	-		RC		RC		RC		RC		RC	

Analysis Results - External Methods*
Area - EXTERNAL

Analyte		*Sample ID* / *Start Date* / *Client ID*	233898 23/05/2023 E11	233899 23/05/2023 E12	233900 23/05/2023 E13	233901 23/05/2023 E14	233902 23/05/2023 E15
2.4.5-T	µg/L		<10	<10	<10	<10	<10
2.4.6-T	µg/L		<10	<10	<10	<10	<10
2.4-D	µg/L		<10	<10	<10	<10	<10
2.4-DB	µg/L		<10	<10	<10	<10	<10
2.4-DP	µg/L		<10	<10	<10	<10	<10
2.6-D	µg/L		<10	<10	<10	<10	<10
4-Chlorophenoxy acetic acid	µg/L		<10	<10	<10	<10	<10
AMPA	µg/L		<10	<10	<10	<10	<10
Clopyralid	µg/L		<10	<10	<10	<10	<10
Dicamba	µg/L		<10	<10	<10	<10	<10
Fluroxypyr	µg/L		<10	<10	<10	<10	<10
Glyphosate	µg/L		<10	<10	<10	<10	<10
MCPA	µg/L		<10	<10	<10	<10	<10
MCPB	µg/L		<10	<10	<10	<10	<10
Mecoprop	µg/L		<10	<10	<10	<10	<10
Pricloram	µg/L		<10	<10	<10	<10	<10
Silvex (2.4.5-TP/Fenoprop)	µg/L		<10	<10	<10	<10	<10
Triclopyr	µg/L		<10	<10	<10	<10	<10

Analysis Results - External Methods*
Area - EXTERNAL

Analyte		*Sample ID* / *Start Date* / *Client ID*	233928 23/05/2023 E11 Filtered 1	233929 23/05/2023 E11 Filtered 2	233930 23/05/2023 E11 Unfiltered	233931 23/05/2023 E12 Filtered 1	233932 23/05/2023 E12 Filtered 2	233933 23/05/2023 E12 Unfiltered	233934 23/05/2023 E13 Filtered 1	233935 23/05/2023 E13 Filtered 2	233936 23/05/2023 E13 Unfiltered	233937 23/05/2023 E14 Filtered 1	233938 23/05/2023 E14 Filtered 2	233939 23/05/2023 E14 Unfiltered
^ Filtered Total Nitrogen as N	mg/L			1.0			0.9			0.9			0.9	
^ Total Nitrogen as N	mg/L				1.4			1.5			1.7			1.6
Ammonia as N	mg/L		0.03			0.04			0.03			0.01		
Dissolved TKN as N	mg/L			0.9			0.8			0.8			0.8	
Filtered Total Phosphorus as P	mg/L			0.14			0.13			0.14			0.12	
Nitrite+Nitrate as N	mg/L		0.06	0.06	0.06	0.09	0.12	0.08	0.11	0.11	0.10	0.05	0.06	0.04
Reactive Phosphorus as P	mg/L		0.13			0.12			0.13			0.10		
Total Kjeldahl Nitrogen as N	mg/L				1.3			1.4			1.6			1.6
Total Phosphorus as P	mg/L				0.24			0.29			0.29			0.29

Analysis Results - External Methods*
Area - EXTERNAL

Analyte		*Sample ID* / *Start Date* / *Client ID*	233940 23/05/2023 E15 Filtered 1	233941 23/05/2023 E15 Filtered 2	233942 23/05/2023 E15 Unfiltered
^ Filtered Total Nitrogen as N	mg/L			0.9	
^ Total Nitrogen as N	mg/L				1.6
Ammonia as N	mg/L		0.01		
Dissolved TKN as N	mg/L			0.8	
Filtered Total Phosphorus as P	mg/L			0.12	
Nitrite+Nitrate as N	mg/L		0.10	0.10	0.09
Reactive Phosphorus as P	mg/L		0.10		
Total Kjeldahl Nitrogen as N	mg/L				1.5
Total Phosphorus as P	mg/L				0.25

Analysis Results - ICVAASW
Area - INORGANIC

Analyte		*Sample ID*	233913	233914	233915	233916	233917
		Start Date	30/05/2023	30/05/2023	30/05/2023	30/05/2023	30/05/2023
		Client ID	E11	E12	E13	E14	E15
Mercury	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05

Analysis Results - ICPAES
Area - INORGANIC

Analyte		*Sample ID*	233913	233914	233915	233916	233917
		Start Date	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023
		Client ID	E11	E12	E13	E14	E15
Aluminium (Lab. filtered)	mg/L		<0.04	<0.04	<0.04	<0.04	<0.04
Barium (Lab. filtered)	mg/L		0.11	0.10	0.11	0.11	0.11
Boron (Lab. filtered)	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (Lab. filtered)	mg/L		33	32	31	33	33
Iron (Lab. filtered)	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (Lab. filtered)	mg/L		16	16	15	17	17
Potassium (Lab. filtered)	mg/L		12	12	12	12	12
Sodium (Lab. filtered)	mg/L		44	44	44	46	46
Strontium (Lab. filtered)	mg/L		0.36	0.36	0.34	0.36	0.37
Sulfur (Lab. filtered)	mg/L		3.2	3.1	3.1	3.1	3.1
Titanium (Lab. filtered)	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analysis Results - ICPMS
Area - INORGANIC

Analyte		*Sample ID* / *Start Date* / *Client ID*	233913 22/05/2023 E11	233914 22/05/2023 E12	233915 22/05/2023 E13	233916 22/05/2023 E14	233917 22/05/2023 E15
Antimony (Lab. filtered)	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (Lab. filtered)	mg/L		0.004	0.005	0.004	0.004	0.004
Beryllium (Lab. filtered)	mg/L		<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
Chromium (Lab. filtered)	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt (Lab. filtered)	mg/L		0.0003	0.0003	0.0002	0.0002	0.0002
Copper (Lab. filtered)	mg/L		0.0020	0.0019	0.0019	0.0016	0.0017
Lead (Lab. filtered)	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium (Lab. filtered)	mg/L		0.0019	0.0019	0.0018	0.0019	0.0019
Manganese (Lab. filtered)	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (Lab. filtered)	mg/L		0.0013	0.0012	0.0012	0.0012	0.0012
Nickel (Lab. filtered)	mg/L		0.0032	0.0032	0.0033	0.0030	0.0031
Selenium (Lab. filtered)	mg/L		<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
Thallium (Lab. filtered)	mg/L		<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
Vanadium (Lab. filtered)	mg/L		0.012	0.011	0.011	0.0099	0.010
Zinc (Lab. filtered)	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001

Analysis Results - ICPAES
Area - INORGANIC

Analyte		*Sample ID* / *Start Date* / *Client ID*	233913 22/05/2023 E11	233914 22/05/2023 E12	233915 22/05/2023 E13	233916 22/05/2023 E14	233917 22/05/2023 E15
Aluminium (acid extractable)	mg/L		5.2	5.5	5.5	4.7	4.8
Barium (acid extractable)	mg/L		0.13	0.13	0.14	0.14	0.14
Boron (acid extractable)	mg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Calcium (acid extractable)	mg/L		34	34	35	35	35
Iron (acid extractable)	mg/L		4.3	4.8	4.8	4.0	4.1
Magnesium (acid extractable)	mg/L		18	18	18	19	19
Manganese (acid extractable)	mg/L		0.14	0.14	0.13	0.13	0.12
Potassium (acid extractable)	mg/L		14	14	14	14	14
Sodium (acid extractable)	mg/L		47	46	47	48	49
Strontium (acid extractable)	mg/L		0.39	0.39	0.39	0.40	0.40
Sulfur (acid extractable)	mg/L		3.3	3.2	3.3	3.3	3.4
Titanium (acid extractable)	mg/L		0.08	0.08	0.08	0.06	0.07

Analysis Results - ICPMS

Area - INORGANIC

Analyte		Sample ID Start Date Client ID	233913 22/05/2023 E11	233914 22/05/2023 E12	233915 22/05/2023 E13	233916 22/05/2023 E14	233917 22/05/2023 E15
Antimony (acid extractable)	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic (acid extractable)	mg/L		0.005	0.005	0.005	0.005	0.005
Beryllium (acid extractable)	mg/L		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
Chromium (acid extractable)	mg/L		0.005	0.005	0.005	0.004	0.004
Cobalt (acid extractable)	mg/L		0.0020	0.0021	0.0023	0.0020	0.0019
Copper (acid extractable)	mg/L		0.0045	0.0046	0.0049	0.0042	0.0042
Lead (acid extractable)	mg/L		0.0012	0.0012	0.0013	0.0012	0.0012
Lithium (acid extractable)	mg/L		0.0030	0.0030	0.0031	0.0029	0.0029
Molybdenum (acid extractable)	mg/L		0.0013	0.0012	0.0012	0.0012	0.0012
Nickel (acid extractable)	mg/L		0.0064	0.0064	0.0066	0.0062	0.0063
Selenium (acid extractable)	mg/L		<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
Thallium (acid extractable)	mg/L		<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
Vanadium (acid extractable)	mg/L		0.020	0.020	0.020	0.019	0.019
Zinc (acid extractable)	mg/L		0.008	0.008	0.009	0.007	0.008

Analysis Results - IGRTSS

Area - INORGANIC

Analyte		Sample ID Start Date Client ID	233923 23/05/2023 E11	233924 23/05/2023 E12	233925 23/05/2023 E13	233926 23/05/2023 E14	233927 23/05/2023 E15
Fixed Suspended Solids	mg/L		68	45	64	58	64
Total Suspended Solids	mg/L		81	53	76	71	77
Volatile Suspended Solids	mg/L		13	8	12	13	14

Analysis Results - QQQPEST
Area - ORGANIC

Analyte		*Sample ID* / *Start Date* / *Client ID*	233903 23/05/2023 E11	233904 23/05/2023 E12	233905 23/05/2023 E13	233906 23/05/2023 E14	233907 23/05/2023 E15
Aldrin	µg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Allethrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Alpha-Chlordane	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
alpha-HCH	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Ametryn	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Atraton	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Atrazine	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
beta-HCH	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Bifenthrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Bioresmethrin	µg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Carbophenothion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Cis-permethrin	µg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Crotoxyphos	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Cyfluthrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Cypermethrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
delta-HCH	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Deltamethrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorvos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Dieldrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Endosulfan II	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Endosulfan I	µg/L		<0.9	<0.9	<0.9	<0.9	<0.9
Endosulfan Sulfate	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Endrin Aldehyde	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Endrin Ketone	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Endrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Fenamiphos	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4

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

Analysis Results - QQQPEST
Area - ORGANIC

Analyte		*Sample ID* / *Start Date* / *Client ID*	233903 23/05/2023 E11	233904 23/05/2023 E12	233905 23/05/2023 E13	233906 23/05/2023 E14	233907 23/05/2023 E15
Fenvalerate	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Gamma-Chlordane	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
gamma-HCH	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Heptachlor Epoxide	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Hexachlorobenzene	µg/L		<0.3	<0.3	<0.3	<0.3	<0.3
Hexazinone	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
L-cyhalothrin	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Methidathion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Azinphos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Chlorpyrifos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Methyl Parathion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Oxyfluorfen	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Parathion	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Phorate	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Profenofos	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Prometon	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Prometryn	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Propargite	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Propazine	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Propetamphos	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Simazine	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Simetryn	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Sulprofos	µg/L		<0.4	<0.4	<0.4	<0.4	<0.4
Tebuconazole	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Tebuthiuron	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Terbuthylazine	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Terbutryn	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachlorvinphos	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Trans-permethrin	µg/L		<0.7	<0.7	<0.7	<0.7	<0.7

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

Area - ORGANIC

Sample ID	Client ID	Method	Start Date	Result
233903	E11	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).
233904	E12	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).
233905	E13	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).
233906	E14	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).
233907	E15	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 Absortion 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

Tests not covered by NATA accreditation 3040 are denoted with *

Codes: **SN =** Sample Note **RN =** Result Note **RC =** Project Comment