



**Corporate Accreditation No 63**  
Accredited for compliance with ISO/IEC 17025 - Testing

## Final Report 299499

**Issue Date:** 19/02/2024  
**Issued By:** [REDACTED] Commercial Client Representative

**Supersedes Report No.:** 299420

**Attention:** [REDACTED]  
**Customer:** Department of Planning and Environment  
**Customer ID:** ZOEH



**Delivery Address:** Sydney Water Corporation  
51 Hermitage Rd  
West Ryde NSW 2114

**Telephone:** [REDACTED]  
**Email:** [REDACTED]

**Address:** [REDACTED]  
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### **Sydney Water Approved Signatory**

[REDACTED] Phycology Analyst	[REDACTED], Phycology Supervisor	[REDACTED] Phycology Analyst
[REDACTED] Nutrients Laboratory Supervisor		

Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered. Uncertainty estimates are available for all accredited test results.

**SAMPLE SUMMARY**

<u>Client Sample ID</u>	<u>Sample Number</u>	<u>Sampling Procedure</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Date Authorised</u>	<u>Description</u>
1	L24009274	1	12/10/2023	24/01/2024	31/01/2024	MFK-Z-E8_20231012 (EW)
2	L24009275	1	12/10/2023	24/01/2024	31/01/2024	MFK-Z-E9_20231012 (EW)
3	L24009276	1	12/10/2023	24/01/2024	31/01/2024	MFK-Z-E10_20231012 (EW)
4	L24009277	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-E1_20231107 (EW)
5	L24009278	1	07/11/2023	24/01/2024	31/01/2024	MFK-BW-E1_20231107 (EW)
6	L24009279	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-E2_20231107 (EW)
7	L24009280	1	07/11/2023	24/01/2024	31/01/2024	MFK-BW-E2_20231107 (EW)
8	L24009281	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-E3_20231107 (EW)
9	L24009282	1	07/11/2023	24/01/2024	31/01/2024	MFK-BW-E3_20231107 (EW)
10	L24009283	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-E4_20231107 (EW)
11	L24009284	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-E5_20231107 (EW)
12	L24009285	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E6_20231109 (EW)
13	L24009286	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E6.5_20231109 (EW)
14	L24009287	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E7_20231109 (EW)
15	L24009288	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E11_20231109 (EW)
16	L24009289	1	09/11/2023	24/01/2024	02/02/2024	MFK-Z-C12_20231109 (CW)
17	L24009290	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E13_20231109 (EW)
18	L24009291	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E14_20231109 (EW)
19	L24009292	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-E15_20231109 (EW)
20	L24009293	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-B1_20231107 (EW)
21	L24009294	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-B2_20231107 (EW)
22	L24009295	1	07/11/2023	24/01/2024	31/01/2024	MFK-Z-B3_20231107 (EW)
23	L24009296	1	09/11/2023	24/01/2024	31/01/2024	MFK-Z-B4_20231109 (EW)
24	L24009297	1	06/12/2023	24/01/2024	15/02/2024	MFK-Z-E1_20231206 (EW)
25	L24009298	1	06/12/2023	24/01/2024	31/01/2024	MFK-BW-E1_20231206 (EW)
26	L24009299	1	06/12/2023	24/01/2024	15/02/2024	MFK-Z-E2_20231206 (EW)

<u>Client Sample ID</u>	<u>Sample Number</u>	<u>Sampling Procedure</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Date Authorised</u>	<u>Description</u>
27	L24009300	1	06/12/2023	24/01/2024	31/01/2024	MFK-BW-E2_20231206 (EW)
28	L24009301	1	06/12/2023	24/01/2024	15/02/2024	MFK-Z-E3_20231206 (EW)
29	L24009302	1	06/12/2023	24/01/2024	31/01/2024	MFK-BW-E3_20231206 (EW)
30	L24009303	1	06/12/2023	24/01/2024	19/02/2024	MFK-Z-E4_20231206 (EW)
31	L24009304	1	06/12/2023	24/01/2024	31/01/2024	MFK-BW-E4_20231206 (EW)
32	L24009305	1	06/12/2023	24/01/2024	19/02/2024	MFK-Z-E5_20231206 (EW)
33	L24009306	1	06/12/2023	24/01/2024	31/01/2024	MFK-BW-E5_20231206 (EW)
34	L24009307	1	06/12/2023	24/01/2024	19/02/2024	MFK-Z-B1_20231206 (EW)
35	L24009308	1	06/12/2023	24/01/2024	19/02/2024	MFK-Z-B2_20231206 (EW)
36	L24009309	1	06/12/2023	24/01/2024	19/02/2024	MFK-Z-B3_20231206 (EW)

**Sampling procedures**

- 1 Samples analysed as received.
- 2 Samples collected as per FS procedures SAWI 070, Excluding Oil & Grease which is collected as per clients instructions.
- 3 Samples collected as per FS procedures SAWI 070.
- 4 Results reported as received from WNSW.

<b>Client Sample ID</b>	17	18	19	20	21	22	23	24
<b>Sampled Date</b>	09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	06/12/2023 12:00:00 AM
<b>Sample Number</b>	L24009290	L24009291	L24009292	L24009293	L24009294	L24009295	L24009296	L24009297

**ALGAL**

**MA71CENT : Blue-Green ID & Enumeration, Including ASU & Biovolumes(Continued)**

Potentially Toxic Blue Green ASU	ASU/mL	-	-	-	-	-	-	-	74.6
Potentially Toxic Blue Green Biovol	mm3/L	-	-	-	-	-	-	-	0.132
Total Blue Green	cells/mL	-	-	-	-	-	-	-	206300

**MA91 : Individual Species Total Count, Total BioVol, Total ASU**

Algae Source*	N/A	-	-	-	-	-	-	-	EXTERNAL
Date of Performance	DD/MM/YY								15/02/24 00:00

**NUTRIENTS**

**NU102 : Total Nitrogen & Total Phosphorus**

Total Nitrogen	mg/L	1.14	1.43	1.38	1.79	1.57	1.03	0.99	1.23
Total Phosphorus	mg/L	0.280	0.270	0.249	0.229	0.232	0.331	0.170	0.221
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24

**NU40 : Ammonia - Nitrogen**

\* Indicates NATA accreditation does not cover the performance of this service

"-" = Not required or refer to Laboratory comment

Client Sample ID		17	18	19	20	21	22	23	24
<b>Sampled Date</b>		09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	06/12/2023 12:00:00 AM
<b>Sample Number</b>		L24009290	L24009291	L24009292	L24009293	L24009294	L24009295	L24009296	L24009297
<b>NUTRIENTS</b>									
<b>NU40 : Ammonia - Nitrogen(Continued)</b>									
Ammonia NH3 -N Low Level	mg/L	0.01	<0.01	<0.01	0.01	0.10	0.01	0.11	<0.01
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>NU43 : Oxidised - Nitrogen</b>									
Oxidised Nitrogen NOx-N Low Level	mg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>NU54 : Soluble Reactive Phosphorus mg P/L.</b>									
Soluble Reactive Phosphorus	mg/L	0.144	0.053	0.046	0.011	0.057	0.212	0.065	0.051
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>NU60 : Filterable Nitrogen &amp; Phosphorus</b>									
Total Filtered Nitrogen	mg/L	0.70	0.77	0.73	0.75	0.80	0.63	0.76	0.65
Filtered Total Phosphorus	mg/L	0.149	0.064	0.071	0.035	0.078	0.233	0.078	0.053

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<b>Client Sample ID</b>	17	18	19	20	21	22	23	24
<b>Sampled Date</b>	09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	07/11/2023 12:00:00 AM	09/11/2023 12:00:00 AM	06/12/2023 12:00:00 AM
<b>Sample Number</b>	L24009290	L24009291	L24009292	L24009293	L24009294	L24009295	L24009296	L24009297

**NUTRIENTS**

Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
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<b>Client Sample ID</b>	25	26	27	28	29	30	31	32
<b>Sampled Date</b>	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM
<b>Sample Number</b>	L24009298	L24009299	L24009300	L24009301	L24009302	L24009303	L24009304	L24009305

**ALGAL**

**MA71CENT : Blue-Green ID & Enumeration, Including ASU & Biovolumes**

Blue Green ASU	ASU/mL	-	919.2	-	922.9	-	1749	-	1491
Blue Green Biovol	mm3/L	-	0.626	-	0.764	-	1.52	-	1.59
Potentially Toxic Blue Green	cells/mL	-	544	-	1360	-	7280	-	5160
Potentially Toxic Blue Green ASU	ASU/mL	-	49.7	-	124.2	-	665.3	-	471.5
Potentially Toxic Blue Green Biovol	mm3/L	-	0.088	-	0.22	-	1.18	-	0.836
Total Blue Green	cells/mL	-	238300	-	296700	-	529700	-	244700

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Client Sample ID		25	26	27	28	29	30	31	32
Sampled Date		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM
Sample Number		L24009298	L24009299	L24009300	L24009301	L24009302	L24009303	L24009304	L24009305
<b>ALGAL</b>									
MA91 : Individual Species Total Count, Total BioVol, Total ASU									
Algae Source*	N/A	-	EXTERNAL	-	EXTERNAL	-	EXTERNAL	-	EXTERNAL
Date of Performance	DD/MM/YY		15/02/24 00:00		15/02/24 00:00		18/02/24 00:00		18/02/24 00:00
<b>NUTRIENTS</b>									
NU102 : Total Nitrogen & Total Phosphorus									
Total Nitrogen	mg/L	1.23	1.17	1.18	1.03	1.16	1.12	1.04	1.06
Total Phosphorus	mg/L	0.235	0.177	0.195	0.159	0.211	0.174	0.172	0.186
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
NU40 : Ammonia - Nitrogen									
Ammonia NH3 -N Low Level	mg/L	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.02	<0.01
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
NU43 : Oxidised - Nitrogen									
Oxidised Nitrogen NOx-N Low Level	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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Client Sample ID		25	26	27	28	29	30	31	32
<b>Sampled Date</b>		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM
<b>Sample Number</b>		L24009298	L24009299	L24009300	L24009301	L24009302	L24009303	L24009304	L24009305
<b>NUTRIENTS</b>									
<b>NU43 : Oxidised - Nitrogen(Continued)</b>									
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>NU54 : Soluble Reactive Phosphorus mg P/L.</b>									
Soluble Reactive Phosphorus	mg/L	0.043	0.038	0.039	0.043	0.050	0.037	0.046	0.061
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>NU60 : Filterable Nitrogen &amp; Phosphorus</b>									
Total Filtered Nitrogen	mg/L	0.65	0.63	0.62	0.64	0.65	0.66	0.67	0.65
Filtered Total Phosphorus	mg/L	0.052	0.045	0.048	0.053	0.072	0.050	0.054	0.061
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24	29/01/24
<b>Client Sample ID</b>		33	34	35	36				
<b>Sampled Date</b>		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM				
<b>Sample Number</b>		L24009306	L24009307	L24009308	L24009309				

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Client Sample ID		33	34	35	36				
Sampled Date		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM				
Sample Number		L24009306	L24009307	L24009308	L24009309				
<b>ALGAL</b>									
<b>MA71CENT : Blue-Green ID &amp; Enumeration, Including ASU &amp; Biovolumes</b>									
Blue Green ASU	ASU/mL	-	2561	795.2	2037				
Blue Green Biovol	mm3/L	-	1.92	0.301	2.01				
Potentially Toxic Blue Green	cells/mL	-	1090	0	3940				
Potentially Toxic Blue Green ASU	ASU/mL	-	75	0.00	345				
Potentially Toxic Blue Green Biovol	mm3/L	-	0.128	0.000	0.636				
Total Blue Green	cells/mL	-	957900	343800	321900				
<b>MA91 : Individual Species Total Count, Total BioVol, Total ASU</b>									
Algae Source*	N/A	-	EXTERNAL	EXTERNAL	EXTERNAL				
Date of Performance	DD/MM/YY		18/02/24 00:00	18/02/24 00:00	18/02/24 00:00				
<b>NUTRIENTS</b>									
<b>NU102 : Total Nitrogen &amp; Total Phosphorus</b>									

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Client Sample ID		33	34	35	36				
Sampled Date		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM				
Sample Number		L24009306	L24009307	L24009308	L24009309				
<b>NUTRIENTS</b>									
<b>NU102 : Total Nitrogen &amp; Total Phosphorus(Continued)</b>									
Total Nitrogen	mg/L	1.03	1.55	1.03	1.10				
Total Phosphorus	mg/L	0.177	0.204	0.162	0.294				
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24				
<b>NU40 : Ammonia - Nitrogen</b>									
Ammonia NH3 -N Low Level	mg/L	0.02	<0.01	<0.01	0.03				
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24				
<b>NU43 : Oxidised - Nitrogen</b>									
Oxidised Nitrogen NOx-N Low Level	mg/L	<0.01	<0.01	<0.01	<0.01				
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24				
<b>NU54 : Soluble Reactive Phosphorus mg P/L.</b>									
Soluble Reactive Phosphorus	mg/L	0.062	0.015	0.041	0.173				

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<b>Client Sample ID</b>		33	34	35	36				
<b>Sampled Date</b>		06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM	06/12/2023 12:00:00 AM				
<b>Sample Number</b>		L24009306	L24009307	L24009308	L24009309				
<b>NUTRIENTS</b>									
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24				
<b>NU60 : Filterable Nitrogen &amp; Phosphorus</b>									
Total Filtered Nitrogen	mg/L	0.66	0.67	0.63	0.66				
Filtered Total Phosphorus	mg/L	0.067	0.033	0.054	0.172				
Date of Performance	DD/MM/YY	29/01/24	29/01/24	29/01/24	29/01/24				

**COMMENTS**

<u>Sample ID</u>	<u>Comment Level</u>	<u>Method</u>	<u>Test</u>	<u>Comment</u>
L24009297	Method	MA91	-	Debris present in the sample.
L24009299	Method	MA91	-	Debris present in the sample.
L24009301	Method	MA91	-	Debris present in the sample.
L24009303	Method	MA91	-	Debris present in the sample.
L24009305	Method	MA91	-	Debris present in the sample.
L24009307	Method	MA91	-	Debris present in the sample.
L24009308	Method	MA91	-	Debris present in the sample.
L24009309	Method	MA91	-	Debris present in the sample.

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**LABORATORY QC RESULTS**

N/A - Not Applicable  
PQL - Practical Quantitation Limit  
LOQ - Limit of Quantification  
RPD - Relative Percent Difference  
SPIKE/Positive Control - Addition of a known amount and concentration  
Duplicate Precision = Accepted - Result 2 within 95% confidence limits of result 1  
Duplicate Precision = Outlier - Result 2 outside 95% confidence limits of result 1  
Duplicate Precision = Not calculated - Result is outside test range

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LOQ	Blank	Control <i>Acceptance Criteria</i>	Spike <i>Acceptance Criteria</i>	Duplicate1	Duplicate2	RPD <i>Acceptance Criteria</i>
<b>NU102 Total Nitrogen</b>						
<0.05 mg/L	<0.05	<b>0.93</b> <i>0.88 - 1.12 mg/L</i>	<b>88 % Recovery</b> <i>80.0 - 120.0 % Recovery</i>	<b>0.98</b>	<b>0.94</b>	<b>4.17 %</b> <i>0.0 - 50.0 %</i>
<b>NU102 Total Phosphorus</b>						
<0.002 mg/L	<0.002	<b>0.052</b> <i>0.045 - 0.055 mg/L</i>	<b>98 % Recovery</b> <i>80.0 - 120.0 % Recovery</i>	<b>0.227</b>	<b>0.205</b>	<b>10.19 %</b> <i>0.0 - 20.0 %</i>
<b>NU40 Ammonia NH3 -N Low Level</b>						
<0.01 mg/L	<0.01	<b>0.20</b> <i>0.18 - 0.22 mg/L</i>	<b>100 % Recovery</b> <i>80.0 - 120.0 % Recovery</i>	<b>0.05</b>	<b>0.05</b>	<b>B</b> <i>0.0 - 0.0 %</i>
<b>NU43 Oxidised Nitrogen NOx-N Low Level</b>						
<0.01 mg/L	<0.01	<b>0.29</b> <i>0.27 - 0.33 mg/L</i>	<b>110 % Recovery</b> <i>80.0 - 120.0 % Recovery</i>	<b>0.04</b>	<b>0.05</b>	<b>B</b> <i>0.0 - 0.0 %</i>
<b>NU54 Soluble Reactive Phosphorus</b>						
<0.002 mg/L	<0.002	<b>0.049</b> <i>0.045 - 0.055 mg/L</i>	<b>105 % Recovery</b> <i>80.0 - 120.0 % Recovery</i>	<b>0.052</b>	<b>0.052</b>	<b>0.00 %</b> <i>0.0 - 20.0 %</i>

Extra Note:

DUPLICATE Ammonia NH3 -N Low Level B: Duplicate RPD reject criteria is not applicable, results are &lt;10 times LOQ

DUPLICATE Oxidised Nitrogen NOx-N Low Level B: Duplicate RPD reject criteria is not applicable, results are &lt;10 times LOQ

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