



ANALYTICAL SERVICES TASMANIA

**18 St Johns Avenue
New Town Laboratory**

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	Date: 21-Nov-23
	Pages: 10 (including this one)
To: Andrew Taylor Entura Hydro Tasmania Address: 4 Elizabeth Street HOBART TAS 7000 Fax No: Phone: 03 6245 4500 Mobile: 0439 824 540	From: AST Reception Fax No . Phone: +61 3 6165 3300

Order No PO 4410087790

Following is a reissue of report number 115081. The new report, issue number 2, contains Changes/Corrections.
Please destroy issue number 1.

The original was sent to:

Accounts Payable Hydro Tasmania, Entura Hydro Tasmania, GPO Box 355 HOBART TAS 7001.

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Thank you.

Laboratory Report

Report No: 115081 Issue No: 2 Report Date: 21-Nov-2023 16:55

Status: Full Report with Changes/Corrections

Site Description: 519791

Received: 13-Nov-23

Submitted to: New Town Laboratory

Submitted By: Kevin Macfarlane (Entura Hydro Tasmania)

Client Order No: PO 4410087790

Report To: Aquatic Inbox

Client: Entura Hydro Tasmania

Address: 89 Cambridge Park Drive CAMBRIDGE TAS 7170

Previous versions of this report did not display adequate significant figures for the Chlorophyll test, please disregard previous report figure for the chlorophyll test.

Samples 473749 and 473750 were subcontracted to the Central Highlands Water- Laboratory Services, 7 Learmonth Rd, Wendouree, Victoria 3353, NATA accreditation number: 1935. The subcontracted laboratory's report number is 23/6521.



Accredited for compliance with ISO/IEC 17025 - Testing.

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Samples analysed as received.**

ANALYTICAL SERVICES TASMANIA

Report No: 115081 **Issue No:** 2 **Report Date:** 21-Nov-2023 16:55

		Lab No:		473751	473752
		Sample ID:		462.5	462.4
		Sampled On:		10/11/23 16:55	10/11/23 17:05
Method	Analyte	Units			
1005-Water	TSS	mg/L	3		
1205-Water	Ammonia	mg-N/L	<0.005	<0.005	
	Nitrate	mg-N/L	0.26	0.24	
	Nitrate + Nitrite	mg-N/L	0.27	0.25	
	Nitrite	mg-N/L	0.005	0.004	
	Phosphorus, Dissolved Reactive	mg-P/L	0.006	0.007	
1206-Water	Nitrogen, Total	mg-N/L	1.1	0.99	
	Nitrogen, Total Kjeldahl	mg-N/L	0.81	0.74	
	Phosphorus, Total	mg-P/L	0.026	0.024	
1209-Water	Silica, Molybdate Reactive	mg/L	11.3		
1210-Water	NPOC Dissolved	mg/L	8.9		
1531-Water	2-Methylisoborneol	µg/L	<0.002	<0.002	
	Geosmin	µg/L	<0.001	<0.001	
1602a-Water	Chlorophyll a	mg	0.0096		
1621-Water	Anatoxin-a Extracellular	µg/L	<0.05	<0.05	
	Anatoxin-a Intracellular	µg/L	<0.05	<0.05	
	Cylindrospermopsin Extracellular	µg/L	<0.10	<0.10	
	Cylindrospermopsin Intracellular	µg/L	<0.10	<0.10	
	Microcystin-LA Extracellular	µg/L	<0.05	<0.05	
	Microcystin-LA Intracellular	µg/L	<0.05	<0.05	
	Microcystin-LF Extracellular	µg/L	<0.10	<0.10	
	Microcystin-LF Intracellular	µg/L	<0.10	<0.10	
	Microcystin-LR Extracellular	µg/L	<0.10	<0.10	
	Microcystin-LR Intracellular	µg/L	<0.10	<0.10	
	Microcystin-LR, desmethyl Extracell	µg/L	<0.10	<0.10	
	Microcystin-LR, desmethyl Intracell	µg/L	<0.10	<0.10	
	Microcystin-LW Extracellular	µg/L	<0.10	<0.10	
	Microcystin-LW Intracellular	µg/L	<0.10	<0.10	
	Microcystin-LY Extracellular	µg/L	<0.05	<0.05	
	Microcystin-LY Intracellular	µg/L	<0.05	<0.05	
	Microcystin-RR Extracellular	µg/L	<0.05	<0.05	
	Microcystin-RR Intracellular	µg/L	<0.05	<0.05	
	Microcystin-YR Extracellular	µg/L	<0.20	<0.20	
	Microcystin-YR Intracellular	µg/L	<0.20	<0.20	
	Nodularin Extracellular	µg/L	<0.05	<0.05	
	Nodularin Intracellular	µg/L	<0.05	<0.05	

Results in BOLD are those that have changed or been added since the report was last issued

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Report No: 115081 **Issue No:** 2 **Report Date:** 21-Nov-2023 16:55

Lab. No. 473749	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. 462.5
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Calculated Biovolume- Total Volume(mm3/L)

Aphanocapsa sp 0.0004

Dolichospermum sp 0.4503

Date/Time Sampled 10-Nov-2023 16:55
 Site 462.5
 Count Collection Method Grab
 Date of Analysis '20/11/23

Date/Time Received 13-Nov-2023 00:00
 Estimate Collection Method N/A
 Preservative Lugols

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Nostocales

Dolichospermum sp	cells/mL	1000
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Order: Synechococcales

Aphanocapsa sp.	cells/mL	290
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Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	10
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

Pennate diatoms	cells/mL	7
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Order: Thalassiosirales

Unidentified centric diatom	cells/mL	110
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Group: Chlorophyta (Green)

Order: Chlamydomonadales

Chlamydomonas sp.	cells/mL	36
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Order: Chlorococcales

Botryococcus sp.	colonies/mL	10
Coelastrum sp.	cells/mL	49
Crucigenia sp.	cells/mL	79
Dictyosphaerium sp.	cells/mL	1000
Oocystis sp.	cells/mL	410
Planktosphaeria	cells/mL	49
Sphaerocystis sp.	cells/mL	220
Unidentified round green cells	cells/mL	890

Order: Desmidiaceae

Cosmocladium sp	cells/mL	39
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Order: Sphaeropleales

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<i>Pediastrum sp.</i>	cells/mL	150
<i>Scenedesmus sp.</i>	cells/mL	510

Order: Volvocales

<i>Eudorina sp.</i>	cells/mL	98
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Order: Zygnematales

<i>Closterium sp.</i>	cells/mL	30
<i>Cosmarium sp.</i>	cells/mL	59
<i>Euastrum sp.</i>	cells/mL	66
<i>Mesotaenium sp.</i>	cells/mL	150
<i>Spondylosium sp.</i>	cells/mL	59
<i>Staurodesmus sp.</i>	cells/mL	26

Group: Cryptophyta

Order: Cryptomonadales

<i>Chroomonas sp.</i>	cells/mL	39
<i>Cryptomonas sp.</i>	cells/mL	110

Group: Euglenophyta (Euglenoids)

Order: Euglenales

<i>Euglena sp.</i>	cells/mL	16
<i>Lepocinclis</i>	cells/mL	10
<i>Trachelomonas sp.</i>	cells/mL	7

Group: Chrysophyta (Golden-Brown)

Order: Chromulinales

<i>Dinobryon sp.</i>	cells/mL	100
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ANALYTICAL SERVICES TASMANIA

Report No: 115081 **Issue No:** 2 **Report Date:** 21-Nov-2023 16:55

Lab. No. 473750	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. 462.4
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Calculated Biovolume- Total Volume(mm3/L)

Aphanocapsa sp 0.0047

Dolichospermum sp 0.4983

Planktolyngbya sp 0.0002

Date/Time Sampled 10-Nov-2023 17:05

Site 462.4

Count Collection Method Grab

Date of Analysis '20/11/23

Date/Time Received 13-Nov-2023 00:00

Estimate Collection Method N/A

Preservative Lugols

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Nostocales

Dolichospermum sp	cells/mL	1200
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Order: Synechococcales

Aphanocapsa sp.	cells/mL	3700
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Planktolyngbya sp.	cells/mL	33
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Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	10
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Order: Peridinales

Peridinium sp.	cells/mL	10
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Group: Bacillariophyta (Diatoms)

Order: Aulacoseirales

Aulacoseira sp.	cells/mL	99
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Order: Bacillariales

Pennate diatoms	cells/mL	16
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Order: Fragilariales

Fragilaria sp.	cells/mL	200
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Order: Thalassiosirales

Unidentified centric diatom	cells/mL	100
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Group: Chlorophyta (Green)

Order: Chlamydomonadales

Chlamydomonas sp.	cells/mL	36
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Order: Chlorococcales

Botryococcus sp.	colonies/mL	7
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Chodatella sp.	cells/mL	7
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Coelastrum sp.	cells/mL	20
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<i>Dictyosphaerium sp.</i>	cells/mL	910
<i>Elakatothrix sp.</i>	cells/mL	10
<i>Gloeocystis sp.</i>	cells/mL	10
<i>Nephrocytium sp.</i>	cells/mL	10
<i>Oocystis sp.</i>	cells/mL	700
<i>Planktosphaeria</i>	cells/mL	740
<i>Sphaerocystis sp.</i>	cells/mL	270
Unidentified round green cells	cells/mL	640

Order: Desmidiaceae

<i>Cosmoecium sp.</i>	cells/mL	49
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Order: Sphaeropleales

<i>Scenedesmus sp.</i>	cells/mL	630
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Order: Volvocales

<i>Eudorina sp.</i>	cells/mL	330
<i>Haematococcus sp.</i>	cells/mL	30

Order: Zygnematales

<i>Closterium sp.</i>	cells/mL	20
<i>Cosmarium sp.</i>	cells/mL	99
<i>Euastrum sp.</i>	cells/mL	10
<i>Staurastrum sp.</i>	cells/mL	7
<i>Staurodesmus sp.</i>	cells/mL	30

Group: Cryptophyta

Order: Cryptomonadales

<i>Chroomonas sp.</i>	cells/mL	89
<i>Cryptomonas sp.</i>	cells/mL	190

Group: Euglenophyta (Euglenoids)

Order: Euglenales

<i>Euglena sp.</i>	cells/mL	20
<i>Trachelomonas sp.</i>	cells/mL	30

Group: Chrysophyta (Golden-Brown)

Order: Chromulinales

<i>Dinobryon sp.</i>	cells/mL	59
<i>Mallomonas sp.</i>	cells/mL	10

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Report No: 115081 **Issue No:** 2 **Report Date:** 21-Nov-2023 16:55

Field Services

Calculated Biovolume; Sampled On 10/11/2023.

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Report No: 115081 Issue No: 2 Report Date: 21-Nov-2023 16:55

Test Method(s) :

Test Date

Biological Testing

1612-Water: Algal Count in Fresh Water by Optical Microscopy

20-Nov-2023

Authorised By:



Stephanie Fulton
Section Head - Biological

Inorganic Testing

1005-Water: Solids, Total Suspended dried at 104 ± 3 °C

14-Nov-2023

Authorised By:



Erin Arnold
Inorganic Chemist

Continued on Next Page

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Report No: 115081 Issue No: 2 Report Date: 21-Nov-2023 16:55

Test Method(s) :

Test Date

Organic and Nutrient Testing

1602a-Water: Chlorophyll a (Filter) 14-Nov-2023

Authorised By:



Ann Wilkinson

Section Head - Client Services

1205-Water: Dissolved Nutrients by FIA 14-Nov-2023

1206-Water: Total Nutrients by Kjeldahl Digest and FIA 14-Nov-2023

1209-Water: Molybdate Reactive Silica in Water 16-Nov-2023

1210-Water: Carbon in Water by Wet Oxidation 15-Nov-2023

Authorised By:



Erin Arnold

Inorganic Chemist

1621-Water: Cyanotoxins in Waters and Algal Blooms 14-Nov-2023

Authorised By:



Laura Tedone

Organic Chemist

1531-Water: Taste & Odour Compounds in Water by GC-MS/MS 14-Nov-2023

Authorised By:



Tim Jordan

A/Section Head - Inorganic
(Metals)



Accreditation No. 5589

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Samples analysed as received.