

South Batemans Bay Link Road

Water Monitoring Report 04/07/2023

SBBLR - Water Monitoring Report

		Revision History
		revision mistory
Version	Release date	Description
0	10/06/2022	First issue water monitoring report EOM May 2022
1	14/07/2022	Updated with data to end of June 2022
2	08/08/2022	Updated with data to end of July 2022
3	05/09/2022	Updated with data to end of Aug 2022
4	05/10/2022	Updated with data to end of Sep 2022
5	07/11/2022	Updated with data to end of Oct 2022
6	02/12/2022	Updated with data to end of Nov 2022
7	16/01/2023	Updated with data to end of Dec 2022
8	06/02/2023	Updated with data to end of Jan 2023
9	03/03/2023	Updated with data to end of Feb 2023
10	04/04/2023	Updated with date to end of Mar 2023
11	01/05/2023	Updated with date to end of Apr 2023
12	05/06/2023	Updated with date to end of May 2023
13	04/07/2023	Updated with date to end of Jun 2023

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1 Environmental Monitoring

1.1 Background

The South Batemans Bay Link Road operates under an Environmental Protection Licence (EPL21590). Under the conditions of the licence the project is required to monitor water quality at specified locations near the project.

1.2 Methodology

To maintain compliance with the Licence the project team has developed a Water Monitoring Program and Response Plan.

Water monitoring is completed by taking samples at specified locations following a rainfall event that exceeds the 5 days 85th percentile event as noted in the Blue Book which is 37.4mm in Batemans Bay. If a breach of the Erosion and Sediment Controls is identified, water monitoring will also be undertaken and an Environmental Report Raised.

Water samples are tested on site for Oil and Grease, pH, Total Suspended Solids Turbidity and Conductivity and results are recorded in a register. ½ litre of water samples are sent to a laboratory to confirm the Total Suspended Solids result.

2 Project Rainfall and Monitoring Update

2.1 Project to Date (October 2021 to Jun 2023)

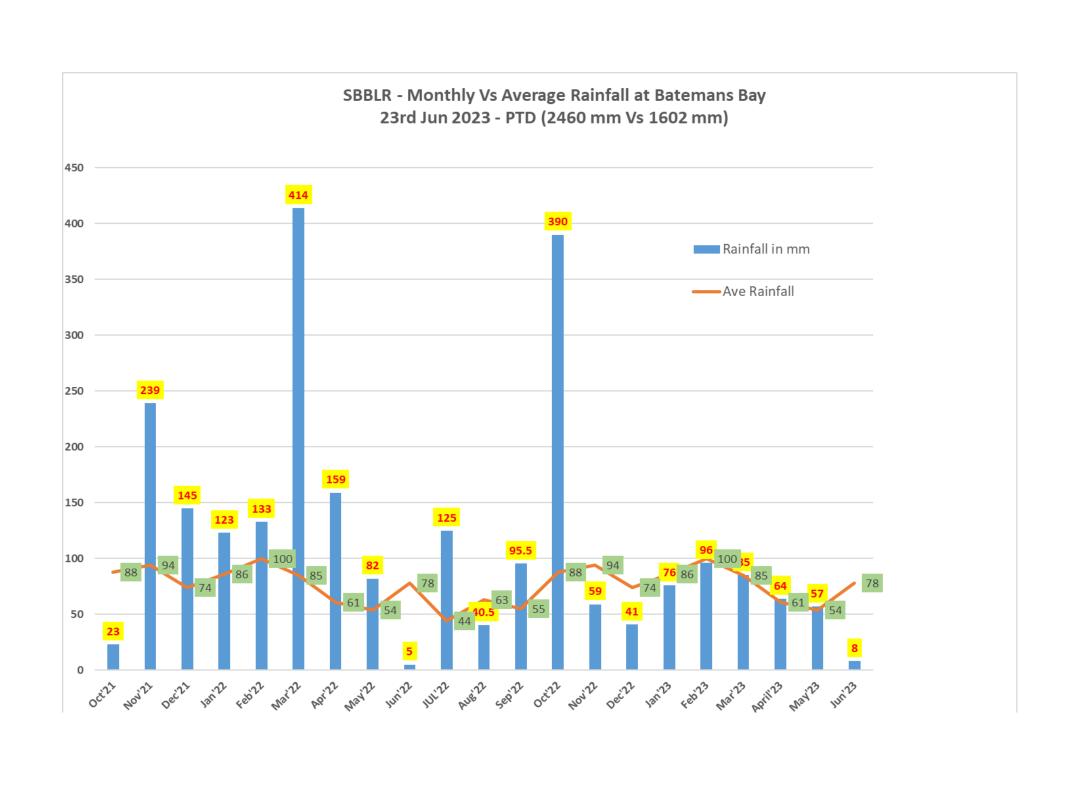
Between the commencement of the project in **October 2021 and Jun 2023** the project has experienced a significant amount of rainfall.

Total rainfall recorded on site during this period is 2,460 mm

The Water Monitoring program was implemented in November 2021 when the Erosion and Sediment Controls were installed, vegetation clearing, and earthworks activities commence. Between October 2021 and Jun 2023, the water monitoring requirement was triggered 21 times samples were sent lab)

2.2 Project Update Jun 2023

During the month of Jun'23 there was **8 mm** of rain recorded on site. The Water Monitoring requirement was not triggered during the month of Jun'23.



4 SBBLR WATER MONITORING REGISTER

Water Quality Monitoring Program

Project South Batemans Bay Link Road Project

Project No P.0056316

EPL No. 21590

Instruments Turbidity Meter Serial No. B05203 / HORIBA

^{*} TSS interpolated in accordance with parameters specified in the Water Monitoring Program

	Rainfall Event																		Т			
											TSS Compliance							Conductivity			I-Aud	
Start Date		Total (mm)	Test Location	Sample Date	Time	Sampled By	Oil & Grease		NTU	TSS*	TSS (LAB)	Tol <50 mg/L	ORPmV	mS/cm		mg/L DO g/l	. TDS	ppt	(ot)	Lab Test Ref	Comments	245_#
10/12/2021	13/12/2021		MCU 35°43′55" S 150°10′03" E - West	13/12/2021		Chris & Sri	None	6.6				Pass	*	*		*	*	*	*			N/A
10/12/2021	13/12/2021		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	13/12/2021	9:50 AM	Chris & Sri	None	8	11.7	5.85		Pass	*			•	*					N/A
	er Quality Display											_										4
13/12/2021	16/12/2021		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	16/12/2021		CB; SN; BM	None	4.95			24	Pass			.208	11.68	0.13			258756-1		
13/12/2021	16/12/2021	59	MCU 35°43'55" S 150°10'03" E - West	16/12/2021	10:51 AM	CB; SN; BM	None	6.01	20.7	10.35	10	Pass	2	62 0	.222	11.6	0.14	7 0.	1	258756-3		
6/01/2022	10/01/2022	70	MCU 35°43'55" S 150°10'03" E - West	10/01/2022	1:30 PM	CNI- DNA	None	7.37	3.4	1.7	210	Fail	١.	41 0	.188	9.73	0.12	2 0.0			No construction impact on stream west of	
6/01/2022	10/01/2022		HRCD (1) 35°43′47″ S 150°10′03″ E - West	10/01/2022	2:15 PM		None	7.36			<5	Pass			.654	10.02	0.12			D .	Princes Hwy	
8/01/2022	12/01/2022		MCU 35°43'47' S 150°10'33' E - Bridge	12/01/2022	11:10 AM		None	6.4			<5	Pass			.509	10.02	0.41			0 286793-4	Refer EER-003	+
8/01/2022	12/01/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	12/01/2022	11:45 AM		None	5.53			18	Pass			.344	10.29	0.32			0 286793-5	Refer EER-003	
7/02/2022	11/02/2022		MCU 35°43′55″ S 150°10′03″ E - West	11/02/2022	10:10 AM		None	4.93			6	Pass			.982	10.98	0.95			0 291208-1	Neier EEN-003	
7/02/2022	11/02/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	11/02/2022	10:30 AM		None	5.37			14	Pass			.291	10.13	0.18			0 291208-2		
23/02/2022	27/02/2022		MCU 35°43′55″ S 150°10′03″ E - West	27/02/2022	8:30 AM		None	5.61			24	Pass			.322	9.79	0.10			0 291208-2	Refer EER-004	
23/02/2022	27/02/2022		HRCD (1) 35°43′47″ S 150°10′33″ E - Bridge	27/02/2022	8:45 AM		None	5.56			36	Pass			0.27	9.62	0.17			0 291208-5	Refer EER-004	
1/03/2022	4/03/2022		MCU 35°43′55″ S 150°10′03″ E - West	4/03/2022	10:30 AM		None	5.87			23	Pass			.498	10.08	0.32			0 291208-7	Refer EER-005	
1/03/2022	4/03/2022		HRCD (1) 35°43′47″ S 150°10′33″ E - Bridge	4/03/2022	10:00 AM		None	5.74			26	Pass			0.18	9.69	0.11			0 291208-8	Refer EER-005	
8/03/2022	9/03/2022		MCU 35°43′55″ S 150°10′03″ E - West	9/03/2022	9:08 AM		None	5.77			6	Pass			.092	10.69	0.0			293689-1	Refer EER-005	
8/03/2022	9/03/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	9/03/2022	8:05 AM		None	5.7			14	Pass			.128	10.23	0.08			293689-2	Refer EER-005	
7/04/2022	11/04/2022		MCU 35°43′55" S 150°10′03" E - West	10/04/2022	11:50		None	6.19			8	Pass			.182	10.31	0.11			0 295871-1	Refer EER-006	
7/04/2022	11/04/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	10/04/2022	12:10	BM	None	5.85			14	Pass	3	22 0	.163	10.38	0.10	5 0.0	8	295871-2	Refer EER-006	
4/07/2022	4/07/2022	54	MCU 35°43'55" S 150°10'03" E - West	4/07/2022	10:30	SN; PB	None	6.27	8.6	4.3	<5	Pass	3	45 0	.274	11.21	0.17	3 0.1	3	300859-1		1:
4/07/2022	4/07/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	4/07/2022	10:45		None	8.06			290	Fail			.437	11.49	0.28			300859-2	NCR 029; EER-009	1:
23/09/2022	26/09/2022	40	MCU 35°43'55" S 150°10'03" E - West	26/09/2022	10:25	SN	None	7.59	38.7	19.35	<5	Pass	2	21 0	.781	9.56	0.48	5 0.3	8	307191-1		1
23/09/2022	26/09/2022	40	HRCD (1) 35°43'47" S 150°10'33" E - Bridge	26/09/2022	10:50	SN	None	7.72	518	259	510	Fail	2	22 0	.364	9.5	0.21	3 0.1	7	307191-2	NCR 032; EER-010	1
26/09/2022	30/09/2022	46	MCU 35°43'55" S 150°10'03" E - West	30/09/2022	9:30	SN; BM	None	6.93	6	3	<5	Pass	3	11 0	.445	11.29	0.27	1 0.2	1	0 307652-1		1
26/09/2022	30/09/2022	46	HRCD (1) 35°43'47" S 150°10'33" E - Bridge	30/09/2022	9:50	SN; BM	None	6.8	60.5	30.25	45	Pass	2	78 0	.513	10.63	0.32	3 0.2	5	0 307652-2		1
1/10/2022	1/10/2022	75	MCU 35°43'55" S 150°10'03" E - West	1/10/2022	8:55		None	6.26	18	9	<5	Pass			.312	11.2	0.19	0.1		307652-4		14
1/10/2022	1/10/2022	75	HRCD (1) 35°43'47" S 150°10'33" E - Bridge	1/10/2022	8:55	BM	None	6.24			11	Pass			.321	11.24	0.20	0.1	5	307652-5		14
5/10/2022	7/10/2022		MCU 35°43'55" S 150°10'03" E - West	7/10/2022		SN; PB	None	8.57			7	Pass			.134	10.32	0.08			307851-1		1
5/10/2022	7/10/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	7/10/2022		SN; PB	None	8.5			14	Pass			.263	10.45	0.16			0 307851-2		1
10/10/2022	10/10/2022		MCU 35°43'55" S 150°10'03" E - West	10/10/2022		SN; BM	None	4.67			6	Pass			.114	10.64	0.07			0 307931-1		10
10/10/2022	10/10/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	10/10/2022		SN; BM	None	5.79			18	Pass			.183	10.47	0.11			0 307931-2		10
21/10/2022	24/10/2022		MCU 35°43'55" S 150°10'03" E - West	24/10/2022		SN; BM	None	6.29			12	Pass			.297	10.39	0.19			0 309073-1		1
21/10/2022	24/10/2022		HRCD (1) 35°43'47" S 150°10'33" E - Bridge	24/10/2022		SN; BM	None	8.52			60	Fail			.586	9.2	0.37			0 309073-2	EPA notified 08/11/2022	1
25/10/2022	25/10/2022		MCU 35°43′55" S 150°10′03" E - West	25/10/2022		SN;CB	None	5.19			18	Pass			.091	10.13	0.05			309073-4		18
25/10/2022	25/10/2022	89	HRCD (1) 35°43'47" S 150°10'33" E - Bridge	25/10/2022	7:52	SN;CB	None	5.13	91.1	45.55	69	Fail	3	86 0	.121	9.4	0.07	0.0	6	309073-5	EPA notified 08/11/2022	18
2023										0											011 00 /02 /0000 110 111 TEED TO 011 TEED TO	
0/02/2022	0 /00 /0000															N/A N/		N/A	N/A	N/A	ON 09/02/2023 NO WATER FLOWING AT	
8/02/2023 10/02/2023	9/02/2023 10/02/2023		HRCD 35°43'47" S 150°10'33" E - Bridge MCU 35°43'55" S 150°10'03" E - West	N/A 10/02/2023		SN; CB SN; PB	None	6.37	8.3	4.15	<5	Pass	N/A	N/A 46	0.79	N/A N/. 11.15	A 0.50	,	,	N/A 0 316398-1	BRIDGE - REF: PHOTOS IN G:DRIVE Report date: 20/02/2023	19
	10/02/2023			10/02/2023		SN; PB	None	5.68			9				.371		0.50			0 316398-1	Report date: 20/02/2023 Report date: 20/02/2023	19
10/02/2023 2/03/2023	7/03/2023		HRCD 35°43'47" S 150°10'33" E - Bridge MCU 35°43'55" S 150°10'03" E - West	7/03/2023	11:40		None	5.68				Pass Pass			0.53	9.53 6.17	0.22			0 318398-2	Report date: 20/02/2023 Report date: 21/03/2023	20
2/03/2023	7/03/2023		HRCD 35°43′47″ S 150°10′03 E - West - West	7/03/2023	11:40		None	5.35			6	Pass			.507	6.17	0.33			0 318393-1	Report date: 21/03/2023	20
13/04/2023	14/04/2023		MCU 35°43'47' S 150°10'33' E - Bridge	14/04/2023		SN; CB SN: PB	None	5.29			10	Pass			.287	7.61	0.32			0 323075/1	Report date: 21/03/2023 Report date: 22/05/2024	2:
13/04/2023	14/04/2023		HRCD 35°43′47″ S 150°10′33″ E - Bridge	14/04/2023		SN; PB	None	5.95			64	Fail			.491	8.61	0.31			0 323075/2	Ref EER 14 DATED 14/04/2023	2
13/04/2023	24/04/2023	43		14/04/2023	0.04	J.1., / D	TOTAL	5.55	113	37.3		1011			.451	0.01	0.31	0.2	-1	52307372	NO. 221. 24 DATED 14/04/2023	+
										n					- 1				+	+		+
										n					- 1				+	+		+
							1		 	0					- 1			+	+	1		+
										0					-				1	1		+
							1	!	t	0					-			1	1	1		+
							1	!	t	0					-			1	1	1		+
							1	!	t	0					-			1	1	1		+
1							1	!	t	n					-			1	1	1		+

5 LAB REPORTS



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 285756

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	3 Water
Date samples received	20/12/2021
Date completed instructions received	20/12/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details	
Date results requested by	04/01/2022
Date of Issue	24/12/2021
NATA Accreditation Number 2901. Thi	s document shall not be reproduced except in full.
Accredited for compliance with ISO/IE	C 17025 - Testing. Tests not covered by NATA are denoted with *

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 285756 Revision No: R00



Miscellaneous Inorganics				
Our Reference		285756-1	285756-2	285756-3
Your Reference	UNITS	HRCD1	HRCD2	MCU2
Date Sampled		16/12/2021	16/12/2021	16/12/2021
Type of sample		Water	Water	Water
Date prepared	-	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	23/12/2021	23/12/2021	23/12/2021
Total Suspended Solids	mg/L	24	12	10

Envirolab Reference: 285756 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 285756 Page | 3 of 6

Revision No: R00

QUALITY COI	NTROL: Mis	cellaneou		Du		Spike Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			23/12/2021	1	23/12/2021	23/12/2021		23/12/2021	
Date analysed	-			23/12/2021	1	23/12/2021	23/12/2021		23/12/2021	
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	24	28	15	97	

Envirolab Reference: 285756

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 285756 Revision No: R00

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 285756 Page | 6 of 6
Revision No: R00



Signature:

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Client: Trans	Client	Client Project Name / Number / Site etc (ie report title): Ph 08 9317 2505 / lab@mpl.com.au											au								
Contact Person: Chris Bearzatto					Batemans Bay Link Road									Melbourne Lab - Envirolab Services							
Project Mgr	Chris Bearzatto				PO No.: Credit Card										1A Dalmore Drive Scoresby VIC 3179 Ph 03 9763 2500 / melbourne@envirolab.com.au						
Sampler: Sri Naidu Address: 153 Auckland Street, Bega NSW 2550						Envirolab Quote No.: Quote request issued 17/12 to D. Springer Date results required: Standard Testing Time Or choose: standard Note: Inform lab in advance if urgent turnaround is required -										1					
Phone:	(02) 6492 9505		<i>rges apply</i> t format: e	sdat / e	quis /		-									rolab.com.au					
Email:	Lab Co	omments:		······································		Toct	e Pegu	ilred		**********	A Same	**************************************	L. Songe		Comments						
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water						SKequ	illed							Provide as much information about the sample as you can		
(j) 3	HRCD1	100mm	16/12/2021	Water	V							TVIRO	AB .	Chatsw	ାଟଠ ୪୬ 12 Asi eod NSI	lov St					
2 2	HRCD2	100mm	16/12/2021	Water	\checkmark							ob No		Ph: (2) 991	6200					
} 1	MCU2	100mm	16/12/2021	Water	\checkmark		1					7	$\dot{\alpha}$	27	6						
											FR TI	ime Re eceive emp: C coling:	ceived Lhy: ool/Am Ice/Ice	bient oack	(12/ 0 (None						
																					
Relinquished by (Company): Transport for NSW					Received by (Company): ECSSY0								Lab use only:								
Print Name: Date & Time		Chris Bear	zatto		2 (62 (2)								_	Samples Received: Cool or Ambient (circle one)							
Signature:				<u>-</u>		Date & Time: 0/12/2/ 2 2 1/00 Signature:								Temperature Received at: (if applicable) Transported by: Hand delivered / courier							

Sydney Lab - Envirolab Services

Perth Lab - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154

12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd ABN 37 112 535 645

ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 286793

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	6 Water
Date samples received	17/01/2022
Date completed instructions received	17/01/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details						
Date results requested by	24/01/2022					
Date of Issue	27/01/2022					
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Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 286793 Revision No: R00



Miscellaneous Inorganics						
Our Reference		286793-1	286793-2	286793-3	286793-4	286793-5
Your Reference	UNITS	HRCD1	HRCD2	MCU2	HRCD1	HRCD2
Date Sampled		06/01/2022	06/01/2022	06/01/2022	12/01/2022	12/01/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	18/01/2022	18/01/2022	18/01/2022	18/01/2022	18/01/2022
Date analysed	-	18/01/2022	18/01/2022	18/01/2022	18/01/2022	18/01/2022
Total Suspended Solids	mg/L	<5	18	210	<5	18

Miscellaneous Inorganics		
Our Reference		286793-6
Your Reference	UNITS	MCU2
Date Sampled		12/01/2022
Type of sample		Water
Date prepared	-	18/01/2022
Date analysed	-	18/01/2022
Total Suspended Solids	mg/L	20

Envirolab Reference: 286793 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 286793 Page | 3 of 7

Revision No: R00

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			18/01/2022	1	18/01/2022	18/01/2022		18/01/2022	
Date analysed	-			18/01/2022	1	18/01/2022	18/01/2022		18/01/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	<5	<5	0	96	

Envirolab Reference: 286793

Revision No: R00

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 286793 Revision No: R00

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 286793 Revision No: R00

Report Comments

Samples received in good order: Holding time exceedance

Envirolab Reference: 286793 Page | 7 of 7 R00

Revision No:



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Circita	Contact Person: Chris Bearzatto				Chen	. Proje	CE Mail	ić / Mr	mper	/ Site e	rc (ie	герогс	uue):					_	•	
Contact Pers					Batemans Bay Link Road								Melbourne Lab - Envirolab Services							
Project Mgr:	Chris Bearzatto				PO No	o.: Cre	dit Car	d							1A Dalmore Drive Scoresby VIC 3179 Ph 03 9763 2500./ melbourne@envirolab.com.au					
Sampler: Sri	Naidu				Envirolab Quote No. : Quote request issued 17/12 to D. Springer								Brisbane Office - Envirolab Services							
Address: 153 Auckland Street, Bega NSW 2550				Or choose: standard Note: Inform lab in advance if urgent turnaround is required - surcharges apply								20a, 10-20 Depot St, Banyo, QLD 4014 Ph 07 3266 9532 / brisbane@envirolab.com.au Adelaide Office - Envirolab Services 7a The Parade, Norwood, SA 5067								
Phone:	(02) 6492 9505	Mob:		0438 636 492	Repor	t form	at: es	lat / e	quis /						Ph	0406 3!	50 706 /	/ adelai	ide@en	virolab.com.au
Email:	Chris Bearz	atto@tran	sport.nsw.go	ov.au:	Lab Co	omme	nts:			_										
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water															Provide as much information about the sample as you can
1	HRCD1	100mm	06/01/2022	Water	✓							-								
2	HRCD2	100mm	06/01/2022	Water	V															
3	MCU2	100mm	06/01/2022	Water	✓													_		
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1	HRCD1	100mm	12/01/2022	Water	\checkmark						,						(COU)	Caes	MOOG I	SW 2007 1910 6200
2	HRCD2	100mm	12/01/2022	Water	\checkmark											નું	<u> No:</u>	354		286793
3	MCU2	100mm	12/01/2022	Water	✓						<u></u>	<u> </u>			•	Da	e Reco			17/112022
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Sydney Lab - Envirolab Services

Perth Lab - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154 Ph 08 9317 2505 / lab@mpl.com.au

12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 291208

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto, Sri Naidu
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	9 Water
Date samples received	17/03/2022
Date completed instructions received	17/03/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details							
Date results requested by	24/03/2022						
Date of Issue	23/03/2022						
NATA Accreditation Number 2901. This document shall not be reproduced except in full.							
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *							

Results Approved By

Diego Bigolin, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 291208 Revision No: R00



Miscellaneous Inorganics						
Our Reference		291208-1	291208-2	291208-3	291208-4	291208-5
Your Reference	UNITS	MCU - West PHWY	HRCD1 - Bridge	HRCD2 - Track	MCU - West PHWY	HRCD1 - Bridge
Date Sampled		27/02/2022	27/02/2022	27/02/2022	04/03/2022	04/03/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	22/03/2022	22/03/2022	22/03/2022	22/03/2022	22/03/2022
Date analysed	-	22/03/2022	22/03/2022	22/03/2022	22/03/2022	22/03/2022
Total Suspended Solids	mg/L	24	36	30	23	26

Miscellaneous Inorganics					
Our Reference		291208-6	291208-7	291208-8	291208-9
Your Reference	UNITS	HRCD2 - Track	MCU - West PHWY	HRCD1 - Bridge	HRCD2 - Track
Date Sampled		04/03/2022	09/03/2022	09/03/2022	09/03/2022
Type of sample		Water	Water	Water	Water
Date prepared	-	22/03/2022	22/03/2022	22/03/2022	22/03/2022
Date analysed	-	22/03/2022	22/03/2022	22/03/2022	22/03/2022
Total Suspended Solids	mg/L	6	6	14	24

Envirolab Reference: 291208 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 291208 Page | 3 of 6

Revision No: R00

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			22/03/2022	1	22/03/2022	22/03/2022		22/03/2022	[NT]
Date analysed	-			22/03/2022	1	22/03/2022	22/03/2022		22/03/2022	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	24	21	13	85	[NT]

Envirolab Reference: 291208

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
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Envirolab Reference: 291208 Revision No: R00

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 291208 Page | 6 of 6
Revision No: R00



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

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Client: Transport for NSW - Chris Bearzatto					Clien	lient Project Name / Number / Site etc (ie report title): Ph 08 9317 2505 / lab@mpl.com.au								au						
	_	on: Chris Bearzatto					Batemans Bay Link Road Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179													
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Envirol Sample		Client Sample ID or information	Depth	Date sampled	<u>Type of sample</u>	Total Suspended Solids in Water														Provide as much information about the sample as you can
ı	1	MCU - West PHWY		27/02/2022	Water	✓		£.		٠										
2	2	HRCD1 - Bridge		27/02/2022	Water	✓	•			_						*				-
3	3	HRCD2 - Track		27/02/2022	Water	\checkmark				.]						·			É# .	op 12 Ashley St
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4-	1	MCU - West PHWY	230 mm	04/03/2022	Water	V													. b +	2: 291208
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Б	3	HRCD2 - Track	100 mm	04/03/2022	Water	√													Time R	sceived: 1400,
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4.	1	MCU - West PHWY	230 mm	09/03/2022	Water	✓												<u> </u>	3 91	Pool/Ambient
0	2	HRCD1 - Bridge	205 mm	09/03/2022	Water	√													ecurit	the many
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Sydney Lab - Envirolab Services

12 Ashley St, Chatswood, NSW 2067

Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 293689

Client Details	
Client	Transport of NSW
Attention	Chris Bearzatto, Sri Naidu
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	3 Water
Date samples received	20/04/2022
Date completed instructions received	20/04/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details						
Date results requested by	28/04/2022					
Date of Issue	02/05/2022					
NATA Accreditation Number 2901. This document shall not be reproduced except in full.						
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *						

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 293689 Revision No: R00



Miscellaneous Inorganics				
Our Reference		293689-1	293689-2	293689-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Date Sampled		10/04/2022	10/04/2022	10/04/2022
Type of sample		Water	Water	Water
Date prepared	-	27/04/2022	27/04/2022	27/04/2022
Date analysed	-	27/04/2022	27/04/2022	27/04/2022
Total Suspended Solids	mg/L	8	14	22

Envirolab Reference: 293689 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 293689 Page | 3 of 7

Revision No: R00

QUALITY CONTROL: Miscellaneous Inorganics						Du	Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			27/04/2022	1	27/04/2022	27/04/2022		27/04/2022	
Date analysed	-			27/04/2022	1	27/04/2022	27/04/2022		27/04/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	8	9	12	91	

Envirolab Reference: 293689

Revision No: R00

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
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>	Greater than
RPD	Relative Percent Difference
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Envirolab Reference: 293689 Revision No: R00

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When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 293689
Revision No: R00

Report Comments

Samples were out of the recommended holding time for this analysis.

Envirolab Reference: 293689 Page | 7 of 7

Revision No: R00

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CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

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Sydney Lab - Envirolab Services

12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 295871

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland St, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	3 Water
Date samples received	19/05/2022
Date completed instructions received	19/05/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details				
Date results requested by	26/05/2022			
Date of Issue	26/05/2022			
NATA Accreditation Number 2901. This document shall not be reproduced except in full.				
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *				

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 295871 Revision No: R00



Miscellaneous Inorganics				
Our Reference		295871-1	295871-2	295871-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Date Sampled		13/05/2022	13/05/2022	13/05/2022
Type of sample		Water	Water	Water
Date prepared	-	25/05/2022	25/05/2022	25/05/2022
Date analysed	-	25/05/2022	25/05/2022	25/05/2022
Total Suspended Solids	mg/L	<5	56	110

Envirolab Reference: 295871 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 295871 Page | 3 of 7
Revision No: R00

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			25/05/2022	1	25/05/2022	25/05/2022		25/05/2022	
Date analysed	-			25/05/2022	1	25/05/2022	25/05/2022		25/05/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	<5	<5	0	92	[NT]

Envirolab Reference: 295871 Page | 4 of 7
Revision No: R00

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 295871 Revision No: R00

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 295871 Revision No: R00

Report Comments

Total suspended solids have exceeded the recommended technical holding times, Envirolab Group form 347 "Recommended Preservation and Holding Times" can be provided on request (available on the Envirolab website)

Envirolab Reference: 295871 Page | 7 of 7

Revision No: R00



CHAIN OF CUSTODY - Client

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Client: Tran	sport for NSW - Chris Bear					_	_						t title):	\neg					npl.com	
Contact Per	son: Chris Bearzatto		.		Client Project Name / Number / Site etc (ie report title): Batemans Bay Link Road								ľ	Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179						
Project Mgr	Chris Bearzatto				PO No.: Credit Card									Phi	03 9763	2500 /	,		179	
Sampler: Sri Naidu					Envirolab Quote No.: Quote request issued 17/12 to D. Springer								Bris	lbourne bane O	Iffice - E	nvirola	b Service	es		
Address;	153 Auckland S		NSW 2550		Or ch <i>Note:</i> surcha	Date results required: Standard Testing Time 20a, 10-20 Depot St, Banyo, QLD 4014 Ph 07 3266 9532 / brisbane@envirolab.com.au Note: Inform lab in advance if urgent turnaround is required - surcharges apply Adelalde Office - Envirolab Services										2014				
Phone:	(02) 6492 9505	Mob:		<u>0438 636 492</u>		rt forma	_	at / ec	uis /							The Para 0406 35			SA 5067	1
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	Sample	e Informatio	D .	_	<u> </u>			-	_		Tes	ts Req	uired							Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water											•				Provide as much Information about the sample as you can
1	MCU	100mm	13/05/2022	Water	V				-			1		_				 	 	
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3	HRCD2	100mm	13/05/2022	Water	~		\neg		Ť				\Box	~	-		-	\vdash		
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Sydney Lab. - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 300859

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland St, Bega, NSW

Sample Details								
Your Reference	Transport for NSW - Batemans Bay Link Road							
Number of Samples	3 Water							
Date samples received	20/07/2022							
Date completed instructions received	20/07/2022							

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details									
Date results requested by	27/07/2022								
Date of Issue	27/07/2022								
NATA Accreditation Number 2901. Th	NATA Accreditation Number 2901. This document shall not be reproduced except in full.								
Accredited for compliance with ISO/IE	C 17025 - Testing. Tests not covered by NATA are denoted with *								

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 300859 Revision No: R00



Miscellaneous Inorganics				
Our Reference		300859-1	300859-2	300859-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Date Sampled		4/07/2022	4/07/2022	4/07/2022
Type of sample		Water	Water	Water
Date prepared	-	25/07/2022	25/07/2022	25/07/2022
Date analysed	-	25/07/2022	25/07/2022	25/07/2022
Total Suspended Solids	mg/L	<5	290	340

Envirolab Reference: 300859 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 300859 Page | 3 of 6

Revision No: R00

QUALITY COI	NTROL: Mis	cellaneou		Du	Spike Recovery %					
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			25/07/2022	3	25/07/2022	25/07/2022		25/07/2022	[NT]
Date analysed	-			25/07/2022	3	25/07/2022	25/07/2022		25/07/2022	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	3	340	340	0	118	[NT]

Envirolab Reference: 300859 Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 300859 Revision No: R00

Quality Control	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
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The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

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Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 300859

Revision No: R00

Page | 6 of 6



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

		ENVI	ROLAB (GROUP - Na	tional	pho	ne nu	mber	1300	42 4	3 44				16	-18 Hay	den Crt		e, WA 61	
Client: Trans	sport for NSW - Chris Bear	zatto		-	Client	Client Project Name / Number / Site etc (ie report title): Ph 08 9317 2505 / lab@mpl.com.au												.au		
Contact Person: Chris Bearzatto						Batemans Bay Link Road													b Servic	
Project Mgr: Chris Bearzatto					PO No	o.: Cre	dit Car	ď												nvirolab.com.au
Sampler: Sri	Naidu			·		Envirolab Quote No.: Quote request issued 17/12 to D. Springer Brisbane Office - Envirolab Services														
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	153 Auckland S	reet, <u>B</u> ega	NSW 2550		Note:	Or choose: standard Note: Inform lab in advance if urgent turnaround is required - surcharges apply Adelaide Office - Envirolab Services 7a The Parade, Norwood, SA 5067 Ph 0406 350 706 / adelaide@envirolab.com.au											7			
Phone:	(02) 6492 9505	Mob:	Ψ.	0438 636 492			at: es	iat / e	quis /		· -	-,			1				_	
Email:					Lab C	omme	nts:													
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water			:						•	c					Provide as much information about the sample as you can
1	MCU	100mm	04/07/2022	Water	V											_				
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Print Name: Date & Time		Chris Bear 6/07/2022	<u> </u>		1	& Time			-			ر م:								
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Form:	302 - Chain of Custody-Client	, Issued 22/0	5/12, Version 5	, Page 1 of 1.		 -			W	ite - L	ab co	py / L	Blue - (

<u>Sydney Lab</u> - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 307191

Client Details		
Client	Transport for NSW	
Attention	Chris Bearzatto	
Address	153 Auckland St, Bega, NSW	

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	3 Water
Date samples received	04/10/2022
Date completed instructions received	04/10/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details								
Date results requested by	11/10/2022							
Date of Issue	11/10/2022							
NATA Accreditation Number 2901. This document shall not be reproduced except in full.								
Accredited for compliance with ISO	Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *							

Results Approved By

Diego Bigolin, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 307191 Revision No: R00



Miscellaneous Inorganics				
Our Reference		307191-1	307191-2	307191-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Depth		0.1	0.1	0.1
Date Sampled		26/09/2022	26/09/2022	26/09/2022
Type of sample		Water	Water	Water
Date prepared	-	11/10/2022	11/10/2022	11/10/2022
Date analysed	-	11/10/2022	11/10/2022	11/10/2022
Total Suspended Solids	mg/L	<5	330	510

Envirolab Reference: 307191 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 307191 Page | 3 of 6

Revision No: R00

QUALITY COI	NTROL: Mis	cellaneou		Du	plicate	Spike Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			11/10/2022	2	11/10/2022	11/10/2022		11/10/2022	
Date analysed	-			11/10/2022	2	11/10/2022	11/10/2022		11/10/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	2	330	360	9	87	

Envirolab Reference: 307191 Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 307191 Revision No: R00

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 307191 Page | 6 of 6

Revision No: R00



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

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Client: Trans	port for NSW - Chris Bearz	zatto			Client	Project						report t	itle):	Ì	Melbourne Lab - Envirolab Services				.s	
Contact Pers	on: Chris Bearzatto	·			<u> </u>			Baten	nans B	ay Link	Road	·			1A I	Dalmore	Drive S			
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Email:	(02) 0102000				Lab Co	mmen	ts:									laide@e		b.com.	au	
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Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

<u>Perth Lab</u> - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154



Envirolab Services Pty Ltd ABN 37 112 535 645

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 307652

Client Details		
Client	Transport for NSW	
Attention	Chris Bearzatto	
Address	153 Auckland St, Bega, NSW	

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	6 Water
Date samples received	10/10/2022
Date completed instructions received	10/10/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details								
Date results requested by	17/10/2022							
Date of Issue	24/10/2022							
NATA Accreditation Number 2901. This document shall not be reproduced except in full.								
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *								

Results Approved By

Diego Bigolin, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 307652 Revision No: R00



Miscellaneous Inorganics						
Our Reference		307652-1	307652-2	307652-3	307652-4	307652-5
Your Reference	UNITS	MCU-West PHWY	HRCD1- Bridge	HRCD2- Track	MCU- West PHWY	HRCD1- Bridge
Depth		100	100	100	100	100
Date Sampled		30/09/2022	30/09/2022	30/09/2022	02/10/2022	02/10/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022
Date analysed	-	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022
Total Suspended Solids	mg/L	<5	45	15	<5	11

Miscellaneous Inorganics		
Our Reference		307652-6
Your Reference	UNITS	HRCD2- Track
Depth		100
Date Sampled		02/10/2022
Type of sample		Water
Date prepared	-	17/10/2022
Date analysed	-	17/10/2022
Total Suspended Solids	mg/L	8

Envirolab Reference: 307652 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 307652 Page | 3 of 6

Revision No: R00

QUALITY COI	NTROL: Mis	cellaneou		Du	plicate	Spike Recovery %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			17/10/2022	4	17/10/2022	17/10/2022		17/10/2022	
Date analysed	-			17/10/2022	4	17/10/2022	17/10/2022		17/10/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	4	<5	5	0	88	[NT]

Envirolab Reference: 307652

Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 307652

Quality Control	ol Definitions									
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.									
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.									
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.									
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.									
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.									

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 307652 Page | 6 of 6



CHAIN OF CUSTODY - Client

FNVTROLAB GROUP - National phone number 1300 42 43 44

		ENVIR	ROLAB G	ROUP - Nat	tional	phone :	numt	er 1	.300	42 43	3 44				16-1		en Crt N	Vlyaree,	WA 615	
Client: Transport for NSW - Chris Bearzatto					Client Project Name / Number / Site etc (ie report title): Melbourne Lab - Envirolab Services															
Contact Person: Chris Bearzatto																				
Project Mgr: Chris Bearzatto Sampler: Sri Naidu Address: 153 Auckland Street, Bega NSW 2550					PO No	PO No.: Credit Card								Ph 03 9763 2500 /						
					Quote request issued 17/12 to D. Envirolab Quote No. : Springer Date results required: Standard Testing Time								melbourne@envirolab.com.au <u>Brisbane Office</u> - Envirolab Services 20a, 10-20 Depot St, Banyo, QLD 4014							
					Note: 1 surcha	Or choose: standard Note: Inform lab in advance if urgent turnaround is required - surcharges apply Ph 07 3266 9532 / brisbane@envirolab.com.au Adelaide Office - Envirolab Services 7a The Parade, Norwood, SA 5067														
Phone:	(02) 6492 9505	Mob:		<u>0438 636 492</u>		t format:		t / eq	uis /						Ph (0406 35	0 706 /			
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	<u>Type of sample</u>	Total Suspended Solids in Water					E nvî î	OLAB	Chats	12 A vood NS	ervices shley St W 2067 10 6200						Provide as much information about the sample as you can
1	MCU - West PHWY	100 mm	30/09/2022	Water	V					Date F	Z Receive	076 d: 16	11/11	12.					·	•
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7 3	HRCD2 - Track	100 mm	30/09/2022	Water	V					Temo	ed by: Cool/A	\$H.								·
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4 1	MCU - West PHWY	100 mm	02/10/2022	Water	V					Securit	y: Intad	t/Broke	n/Non			·				
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Relinquished by (Company): Transport for NSW				Received by (Company): ET STYD									se only							
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Date & Time		4/10/2022			_	& Time:			27		13.	50	<u></u>	•					t:/&	
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Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 307851

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street,, Bega, NSW, 2550

Sample Details						
Your Reference	Transport for NSW - Batemans Bay Link Road					
Number of Samples	3 Water					
Date samples received	12/10/2022					
Date completed instructions received	12/10/2022					

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details					
Date results requested by	19/10/2022				
Date of Issue	24/10/2022				
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Accredited for compliance with ISO/	IEC 17025 - Testing. Tests not covered by NATA are denoted with *				

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 307851 Revision No: R00



Miscellaneous Inorganics				
Our Reference		307851-1	307851-2	307851-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Depth		100	100	100
Date Sampled		07/10/2022	07/10/2022	07/10/2022
Type of sample		Water	Water	Water
Date prepared	-	19/10/2022	19/10/2022	19/10/2022
Date analysed	-	19/10/2022	19/10/2022	19/10/2022
Total Suspended Solids	mg/L	7	14	24

Envirolab Reference: 307851 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 307851 Page | 3 of 6

Revision No: R00

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			19/10/2022	1	19/10/2022	19/10/2022		19/10/2022	
Date analysed	-			19/10/2022	1	19/10/2022	19/10/2022		19/10/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	7	8	13	95	

Envirolab Reference: 307851 Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 307851 Revision No: R00

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 307851 Page | 6 of 6



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

ENVIROLAB GROUP - National phone number 1300 42 43 44								•	16-18 Hayden Crt Myaree, WA 6154 Ph 08 9317 2505 / lab@mpl.com.au										
Client: Tran	sport for NSW - Chris Bearz	atto	·		Client Project Name / Number / Site etc (ie report title):														
Contact Per	son: Chris Bearzatto				Batemans Bay Link Road							Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179							
Project Mgr	: Chris Bearzatto		,		PO No	PO No.: Credit Card							Pŀ	03 976	3 2500 ,	/ melbo	urne@e	envirolab.com.au	
Sampler: Sr	i Naidu				Envirolab Quote No.: Quote request issued 17/12 to D. Springer									Envirola St, Bany					
Address:					Date	results r	equired:		Star	idard 1	Testing	Time							virolab.com.au
153 Auckland Street, Bega NSW 2550				Note: surcha	arges app	ab in adva aly			around	is requi	red -		7a	The Pa	rade, No	Envirola orwood, / adelai	SA 506		
Phone:	(02) 6492 9505	Mob:		0438 636 492			t: esdat	equis						l					
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled ;	Type of sample	Total Suspended Solids in Water											,			Provide as much information about the sample as you can
1	мси	100mm	07/10/2022	Water	V														MCU 35°43'55" S 150°10'03" - West
2	HRCD1	100mm	07/10/2022	Water	√														HRCD (1) 35°43'47" S 150°10'33" E - Bridge
3	HRCD2	100mm	07/10/2022	Water	✓				ENVIRO	DLAB			rvices ley St						HRCD (2) 35°43'47" S 150°10'33" E - Track
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Print Name		Bryan McM	1ahon								1	Samples Received: Coal or Ambient (gircle one)							
Date & Tim		7/10/2022									Temperature Received at: (8°C (if applicable)								
Signature:	BM M	<u> </u>			Signa	ture:			11/16:4-	1-6		Divo	Clian		<u> </u>		land de	_	ed / courier

Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 307931

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	3 Water
Date samples received	13/10/2022
Date completed instructions received	13/10/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details					
Date results requested by	20/10/2022				
Date of Issue	20/10/2022				
NATA Accreditation Number 2901. This document shall not be reproduced except in full.					
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *					

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 307931 Revision No: R00



Miscellaneous Inorganics				
Our Reference		307931-1	307931-2	307931-3
Your Reference	UNITS	MCU	HRCD1	HRCD2
Depth		100	100	100
Date Sampled		10/10/2022	10/10/2022	10/10/2022
Type of sample		Water	Water	Water
Date prepared	-	20/10/2022	20/10/2022	20/10/2022
Date analysed	-	20/10/2022	20/10/2022	20/10/2022
Total Suspended Solids	mg/L	6	18	22

Envirolab Reference: 307931 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 307931 Page | 3 of 6

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			20/10/2022	1	20/10/2022	20/10/2022		20/10/2022	[NT]
Date analysed	-			20/10/2022	1	20/10/2022	20/10/2022		20/10/2022	[NT]
Total Suspended Solids	mg/L	5	Inorg-019	<5	1	6	6	0	86	[NT]

Envirolab Reference: 307931 Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 307931

Quality Control	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

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The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

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In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

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Measurement Uncertainty estimates are available for most tests upon request.

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 307931 Page | 6 of 6 R00



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

GROL		ENVIR	OLAB GI	ROUP - Natio	onal p	hone	num	ber 1	300 4	2 43	44	,,`		1 1	6-18 Ha	yden C		e, WA 6			
Client: Trans	sport for NSW - Chris Bear	zatto			Client	Proje	ct Nam	e / Nu	mber /	Site e	etc (ie	report	title):				-	mpl.con	•		
Contact Pers	son: Chris Bearzatto				Batemans Bay Link Road											<u>Melbourne Lab</u> - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179					
Project Mgr	: Chris Bearzatto				PO No.: Credit Card														envirolab.com.au		
Sampler: Sri Naidu					Envirolab Quote No.: Quote request issued 17/12 to D. Springer Date results required: Standard Testing Time										Oa, 10-2	20 Depo	t St, Baı	ab Servi 1yo, QLD	0 4014		
Address:	153 Auckland S	Street. Bega N	ISW 2550				requi standa			Stan	igar g i	esung	ime	1					nvirolab.com.au		
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Phone:	(02) 6492 9505	Mob:		<u>0438 636 492</u>	Repo	t form	at: esc	iat / ed	uis /		-										
Email:	Chris.Bea	rzatto@trans	sport.nsw.gov	/.au;	Lab C	omme	nts:														
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water									•					Provide as much information about the sample as you can		
1	MCU	100 mm	10/10/2022	Water	1														MCU 35°43'55" S 150°10'03" E - West		
2	HRCD1	100 mm	10/10/2022	Water	1														HRCD (1) 35°43'47" S 150°10'33" E - Bridge		
3	HRCD2	100 mm	10/10/2022	Water	1					-						,			HRCD (2) 35°43'47" S 150°10'33" E - Track		
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Signature: 7 Form: 302 - Chain of Custody-Client, Issued 22/05/12) Version 5, Page 1 of 1.					Signa	ture:			W	hite -	Lab o				Transported by: Hand delivered / (courier copy / Pink - Retain in Book Page No:						

Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 309073

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland St, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	6 Water
Date samples received	27/10/2022
Date completed instructions received	27/10/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details	
Date results requested by	03/11/2022
Date of Issue	03/11/2022
NATA Accreditation Number 2901. Thi	s document shall not be reproduced except in full.
Accredited for compliance with ISO/IEG	C 17025 - Testing. Tests not covered by NATA are denoted with *

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 309073 Revision No: R00



Miscellaneous Inorganics						
Our Reference		309073-1	309073-2	309073-3	309073-4	309073-5
Your Reference	UNITS	MCU	HRCD1	HRCD2	MCU	HRCD1
Depth		100	100	100	100	100
Date Sampled		24/10/2022	24/10/2022	24/10/2022	25/10/2022	25/10/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Date analysed	-	03/11/2022	03/11/2022	03/11/2022	03/11/2022	03/11/2022
Total Suspended Solids	mg/L	12	60	69	18	69

Miscellaneous Inorganics		
Our Reference		309073-6
Your Reference	UNITS	HRCD2
Depth		100
Date Sampled		25/10/2022
Type of sample		Water
Date prepared	-	03/11/2022
Date analysed	-	03/11/2022
Total Suspended Solids	mg/L	56

Envirolab Reference: 309073 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 309073 Page | 3 of 6

QUALITY COI	NTROL: Mis	cellaneou	s Inorganics			Du	Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			03/11/2022	5	03/11/2022	03/11/2022		03/11/2022	
Date analysed	-			03/11/2022	5	03/11/2022	03/11/2022		03/11/2022	
Total Suspended Solids	mg/L	5	Inorg-019	<5	5	69	80	15	91	

Envirolab Reference: 309073

Revision No: R00

Page | 4 of 6

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 309073 Revision No: R00

Quality Control	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
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LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
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The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 309073 Page | 6 of 6 R00



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

GRO		ENVIR	OLAB GRO	OUP - Nation	al pho	one n	umbe	r 13(10 42	43 4	4				1	16-18 H	ayden C	Laborato rt Myare	e, WA 6		
Client: Tran	sport for NSW - Chris Be	earzatto			Clien	t Proje	ct Nan	ie / Ni	ımber	Site	etc (le	report	title):			Ph 08 9317 2505 / lab@mpf.com.au					
Contact Pen	son: Chris Bearzatto		<u></u>		<u> </u>			Bater	nans B	ay Lin	k Roac	i				Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179					
Project Mgr	Chris Bearzatto				PO No.: Credit Card											Ph 03 9763 2500 / melbourne@envirolab.com.au					
Sampler: Sri Naldu					Envirolab Quote No. : Quote request issued 17/12 to D. Springer									.]	<u>Brisbane Office</u> - Envirolab Services 20a, 10-20 Depot St, Banyo, QLD 4014						
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	153 Aucklan	d Street, Beg	a NSW 2550		Or choose: standard Note: Inform lab in advance if urgent turnaround is required - surcharges apply Ph 07 3266 9532 / brisbane@envirolab.com.au Adelaide Office - Envirolab Services 7a The Parade, Norwood, SA 5067 Ph 0406 350 706 / adelaide@envirolab.com.au												67				
Phone:	(02) 6492 9505	Mob:		0438 636 492	_		nat: esc	lat / e	quis /		-										
Email:					Lab C	omme	nts:														
	Chris.Be	earzatto@tra	ansport.nsw.go	v.au;	<u> </u>										<u></u>						
	San	nple Informat	tion							,	Tes	ts Req	uired		, .	y	,			Comments	
Envirolab Sample ID	Client Sample ID or Information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water							\	No:	Cha	1 tswood Ph: (02	Ashle INSW 9910	St 2067 2000			Provide as much information about the sample as you can	
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2	HRCD1	100 mm	24/10/2022	Water	1							Cool	: Coo ing: Ic	Лсер	ck	diona.	az			HRCD (1) 35°43'47" S 150°10'33" E - Bridge	
3	HRCD2	100 mm	24/10/2022	Water	✓							Sec	nty: If	acy a	токет	VOI 10	22	٥		HRCD (2) 35°43′47″ S 150°10′33″ E - Track	
4	MCU	100 mm	25/10/2022	Water	. 🗸				_											MCU 35º43'55" S 150º10'03" E - West	
5	HRCD1	100 mm	25/10/2022	Water	1											_				HRCD (1) 35°43'47" S 150°10'33" E - Bridge	
6	HRCD2	100 mm	25/10/2022	Water	1															HRCD (2) 35°43'47" S 150°10'33" E - Track	
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Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067

Ph 02 9910 6200 / sydney@envirolab.com.au



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 316398

Client Details	
Client	Transport for NSW
Attention	Sri Naidu
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	2 Water
Date samples received	13/02/2023
Date completed instructions received	13/02/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details	
Date results requested by	20/02/2023
Date of Issue	20/02/2023
NATA Accreditation Number 2901. The	nis document shall not be reproduced except in full.
Accredited for compliance with ISO/IE	EC 17025 - Testing. Tests not covered by NATA are denoted with *

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 316398 Revision No: R00



Miscellaneous Inorganics			
Our Reference		316398-1	316398-2
Your Reference	UNITS	MCU	HRCD1
Depth		70	70
Date Sampled		10/02/2023	26/09/2022
Type of sample		Water	Water
Date prepared	-	16/02/2023	16/02/2023
Date analysed	-	16/02/2023	16/02/2023
Total Suspended Solids	mg/L	9	<5

Envirolab Reference: 316398 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 316398 Page | 3 of 6

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			16/02/2023	[NT]		[NT]	[NT]	16/02/2023	
Date analysed	-			16/02/2023	[NT]		[NT]	[NT]	16/02/2023	
Total Suspended Solids	mg/L	5	Inorg-019	<5	[NT]	[NT]	[NT]	[NT]	96	[NT]

Envirolab Reference: 316398
Revision No: R00

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 316398

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 316398 Page | 6 of 6

R00



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

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Client: Transport for NSW - Chris Bearzatto				Client Project Name / Number / Site etc (ie report title):							:				-	•				
Contact Pers	son: Sri Naidu				Batemans Bay Link Road								Melbourne Lab - Envirolab Services 1A Dalmore Drive Scoresby VIC 3179							
Project Mgr:	Chris Bearzatto				PO No.: Credit Card							Ph 03 9763 2500 / melbourne@envirolab.com.au								
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Page No:

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph 02 9910 6200 / sydney@envirolab.com.au

<u>Perth Lab</u> - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154



Envirolab Services Pty Ltd ABN 37 112 535 645 Shley St Chatswood NSW 2067

12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 318393

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	2 Water
Date samples received	10/03/2023
Date completed instructions received	10/03/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details		
Date results requested by	17/03/2023	
Date of Issue	17/03/2023	
NATA Accreditation Number 2901.	This document shall not be reproduced except in full.	
Accredited for compliance with ISO	/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Diego Bigolin, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 318393 Revision No: R00



Miscellaneous Inorganics			
Our Reference		318393-1	318393-2
Your Reference	UNITS	MCU	HRCD1
Depth		100	50
Date Sampled		07/03/2023	07/03/2023
Type of sample		Water	Water
Date prepared	-	16/03/2023	16/03/2023
Date analysed	-	16/03/2023	16/03/2023
Total Suspended Solids	mg/L	<5	6

Envirolab Reference: 318393 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 318393 Page | 3 of 6

QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			16/03/2023	[NT]		[NT]	[NT]	16/03/2023	
Date analysed	-			16/03/2023	[NT]		[NT]	[NT]	16/03/2023	
Total Suspended Solids	mg/L	5	Inorg-019	<5	[NT]		[NT]	[NT]	112	

Envirolab Reference: 318393

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 318393

Quality Contro	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
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The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

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Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 318393 Page | 6 of 6



CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Client: Trans	sport for NSW - Ch <u>ris Bearz</u>	atto			Client Project Name / Number / Site etc (ie report title):							,	Ph 08 9317 2505 / lab@mpl.com.au						
Contact Pers	son: Sri Naidu; Tanya Koell	ner					Baten	nans Ba	y Link	Road	<u> </u>						Enviroi		
Project Mgr:	Chris Bearzatto				PO No.: Credit Card										e Score		. 3179 Denvirolab.com.au		
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Phone:	(02) 6492 9505	Mob:		<u>0438 636 492</u>		t format: e	sdat / e	quis /									•	_	
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Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water	_													Provide as much information about the sample as you can
1	MCU	100 MM	07/03/2023	Water	√														MCU 35º43'55" S 150º10'03" E - West
2	HRCD1	50mm	07/10/2022	Water	√														HRCD 35°43'47" S 150°10'33" E - Bridge
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Sydney Lab_- Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au

<u>Perth Lab</u> - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154



Envirolab Services Pty Ltd

ABN 37 112 535 645 12 Ashley St Chatswood NSW 2067 ph 02 9910 6200 fax 02 9910 6201 customerservice@envirolab.com.au www.envirolab.com.au

CERTIFICATE OF ANALYSIS 323075

Client Details	
Client	Transport for NSW
Attention	Chris Bearzatto
Address	153 Auckland Street, Bega, NSW, 2550

Sample Details	
Your Reference	Transport for NSW - Batemans Bay Link Road
Number of Samples	2 Water
Date samples received	15/05/2023
Date completed instructions received	15/05/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details						
Date results requested by	22/05/2023					
Date of Issue	22/05/2023					
NATA Accreditation Number 2901. This document shall not be reproduced except in full.						
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *						

Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Envirolab Reference: 323075 Revision No: R00



Miscellaneous Inorganics			
Our Reference		323075-1	323075-2
Your Reference	UNITS	MCU	HRCD1
Depth		100mm	100mm
Date Sampled		14/04/2023	14/04/2023
Type of sample		Water	Water
Date prepared	-	17/05/2023	17/05/2023
Date analysed	-	17/05/2023	17/05/2023
Total Suspended Solids	mg/L	10	64

Envirolab Reference: 323075 Revision No: R00

Method ID	Methodology Summary
Inorg-019	Suspended Solids - determined gravimetricially by filtration of the sample. The samples are dried at 104+/-5°C.

Envirolab Reference: 323075
Revision No: R00
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QUALITY COI		Du	Spike Recovery %							
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			17/05/2023	[NT]		[NT]	[NT]	17/05/2023	
Date analysed	-			17/05/2023	[NT]		[NT]	[NT]	17/05/2023	
Total Suspended Solids	mg/L	5	Inorg-019	<5	[NT]		[NT]	[NT]	108	

Envirolab Reference: 323075
Revision No: R00
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Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 323075 Revision No: R00

Quality Control Definitions								
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.							
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.							
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix is to monitor the performance of the analytical method used and to determine whether matrix interference exist.							
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.							
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.							

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 323075
Revision No: R00

Report Comments

Samples were out of the recommended holding time for this analysis.

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CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 42 43 44

Client: Transport for NSW - Chris Bearzatto				Client Project Name / Number / Site etc (ie report title):											Ph 08 9317 2505 / lab@mpl.com.au					
Contact Person: Sri Naidu; Tanya Koellner					Batemans Bay Link Road									Melbourne Lab - Envirolab Services						
Project Mgr: Chris Bearzatto					PO No.: Credit Card										1A Dalmore Drive Scoresby VIC 3179 Ph 03 9763 2500 / melbourne@envirolab.com.au <u>Brisbane Office</u> - Envirolab Services 20a, 10-20 Depot St. Banyo, OLD 4014					
Sampler: Sri Naidu Address: 153 Auckland Street, Bega NSW 2550					Quote request issued 17/12 to D. Envirolab Quote No. : Springer Date results required: Standard Testing Time															
										surcharges apply										7a The Parade, Norwood, SA 5067 Ph 0406 350 706 / adelaide@envirolab.com.au
Email:	<u> </u>				Report format: esdat / equis / Lab Comments:										1			, oo, u		ge.wii olab.com.au
	<u>Chris.Bea</u>	rzatto@trans	port.nsw.gov	v.au;										-						
	Samp	le information					_				Tes	sts Re	uired							Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Total Suspended Solids in Water															Provide as much information about the sample as you can
1	MCU	100 MM	14/04/2023	Water	✓															MCU 35°43′55″ S 150°10′03″ E - West
2	HRCD1	100mm	14/04/2023	Water	✓															HRCD 35°43'47" S 150°10'33" E - Bridge
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Print Name: Sri Naidu P				Print N			<u>حرح ر</u>							Samples Received: Cool or Ambient (circle one)						
C					Date & Time: 15/5/23 1100 T Signature: Lm									Tempe Trance	erature	Rece	ived at	: 20	(if applicable)	
Form: 302	? - Chain of Custody-Client, Iss	sued 22/05/12. \	ersion 5. Page	1 of 1					Whi	te - Li	ah coi	nv / A	lue - C							

Sydney Lab - Envirolab Services 12 Ashley St, Chatswood, NSW 2067 Ph 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories 16-18 Hayden Crt Myaree, WA 6154

6 PIRMP Summary



South Batemans Bay Link Road

Pollution Incident Response Management Plan - Summary EPL 21590

Under Part 5.7 of the *Protection of the Environment Operations Act 1997*, there is a duty to notify each relevant authority (identified below) of a pollution incident, where material harm to the environment is caused or threatened. Material harm includes actual or potential harm to the health or safety of human beings or to ecosystems, that is not trivial or that results in actual or potential loss or property damage of an amount over \$10,000.

In the event of a potential pollution incident causing or threatening material harm, and in accordance with the Pollution Incident Response Management Plan project staff will seek immediate assistance from the Works Supervisor and Senior Project Engineer in consultation with the Environment and Sustainability Manager to determine whether notification to the relevant authorities is required. If the site staff listed above are not available, staff will contact the District Works Manager in Bega and the Senior Environment and Sustainability Manager to determine whether notification to the relevant authorities is required. If none of the listed contacts are available, the most senior staff member available will determine whether notification to the relevant authorities is required. If an incident is determined to be Material Harm, the most senior staff member available will advise who will make notification to the relevant authorities, as detailed below.

Relevant Authority Notification								
If the incident presents an immediate threat to human health or property, notification will be undertaken in the following order:								
Fire and Rescue NSW	000							
EPA	131 555							
Ministry of Health Southern Health District	1800 999 880							
Safe Work NSW	131 050							
Eurobodalla Shire	02 4474 1000							
If there is not an immediate threat to human health or the environment, notification will be undertaken								
in the following order:								
EPA Environment Line	131 555							
Eurobodalla Shire	02 4474 1000							
Ministry of Health Southern Health District	1800 999 880							
Safe Work NSW	131 050							
Fire and Rescue NSW	1300 729 579							

Community Advice Mechanisms

Early warnings for affected or potentially affected community members for any pollution incident are to be communicated by methods such as door knocking, letters, signs, notices, local papers, leaflets, etc. (minimum of letter box drop and a clearly visible sign on premises). For air pollution incidents that may affect community members, those community members may be asked to either close their doors and windows and stay indoors until further notice or to vacate the premises. For water pollution incidents that may affect community members, those community members may be asked to avoid use of the water until further notice.

Transport for NSW will provide regular updates of any pollution incidents either via letterbox drop, notices in local papers and/or via door knocks as required.