

CERTIFICATE OF ANALYSIS

Work Order : **EW2001210**
Client : **WOLLONGONG CASH CLIENTS**
Contact : Rick Oudejans
Address : Lot 51 243-245 Berkeley Rd

Telephone : ----
 Project : ECSOL Overflow
 Order number : ----
 C-O-C number : ----
 Sampler : Rick Oudejans
 Site : ----
 Quote number : EN/333
 No. of samples received : 2
 No. of samples analysed : 2

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Laboratory : Environmental Division NSW South Coast
Contact : Aneta Prosaroski
Address : 1/19 Ralph Black Dr, North Wollongong 2500
 4/13 Geary Pl, North Nowra 2541
 Australia NSW Australia
 Telephone : +61 2 4225 3125
 Date Samples Received : 05-Mar-2020 10:34
 Date Analysis Commenced : 05-Mar-2020
 Issue Date : 13-Mar-2020 13:03



Accreditation No. 825
 Accredited for compliance with
 ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Glenn Davies	Environmental Services Representative	Laboratory - Wollongong, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

Ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- **Analytical work for this work order will be conducted at ALS Sydney.**
- pH and conductivity data supplied by ALS Wollongong.
- pH and conductivity tests completed on day of receipt.



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	North ECSOL	Overflow	----	----	----
Client sampling date / time					04-Mar-2020 11:35	04-Mar-2020 11:35	----	----	----
Compound	CAS Number	LOR	Unit		EW2001210-001	EW2001210-002	-----	-----	-----
				Result	Result		----	----	----
EA005FD: Field pH									
pH	----	0.1	pH Unit		11.3	11.6	----	----	----
EA010FD: Field Conductivity									
Electrical Conductivity (Non Compensated)	----	1	µS/cm		569	936	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		293	114	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L		0.015	0.003	----	----	----
Copper	7440-50-8	0.001	mg/L		0.020	0.006	----	----	----
Nickel	7440-02-0	0.001	mg/L		0.001	0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		0.018	0.012	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EP020: Oil and Grease (O&G)									
Oil & Grease	----	5	mg/L		16	<5	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L		220	150	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		220	150	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		250	130	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		250	130	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	<100	----	----	----



Analytical Results

Sub-Matrix: **WATER**
 (Matrix: **WATER**)

Client sample ID

				North ECSOL	Overflow	----	----	----
Client sampling date / time				04-Mar-2020 11:35	04-Mar-2020 11:35	----	----	----
Compound	CAS Number	LOR	Unit	EW2001210-001	EW2001210-002	-----	-----	-----
				Result	Result	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	----	----	----
Toluene	108-88-3	2	µg/L	<2	3	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	----	----	----
^ Total Xylenes	----	2	µg/L	<2	<2	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	3	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	<5	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	2	%	103	103	----	----	----
Toluene-D8	2037-26-5	2	%	110	103	----	----	----
4-Bromofluorobenzene	460-00-4	2	%	111	108	----	----	----



Surrogate Control Limits

Sub-Matrix: **WATER**

		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128