



NEW HOPE
GROUP

G.4.4 Stage 3 Water Quality Laboratory Results






CERTIFICATE OF ANALYSIS

Client	: SINCLAIR KNIGHT MERZ	Laboratory	: Environmental Division Brisbane	Page	: 1 of 5
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Project	: QE06455.004	Quote number	: EN/003/05	No. of samples	: - Received : 10
Order number	: SKM SQ				: - Analyzed : 10
C-O-C number	: - Not provided -				
Site	: New Aclands EIS				

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825

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This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
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Page Number : 2 of 5
Client : SINCLAIR KNIGHT MERZ
Work Order : EB0711541

Comments

This report for the ALSE reference EB0711541 supersedes any previous reports with this reference. Results apply to the samples as submitted. All pages of this report have been checked and approved for release.

This report contains the following information:

- Analytical Results for Samples Submitted
- Surrogate Recovery Data

The analytical procedures used by ALS Environmental have been developed from established internationally-recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported herein. Reference methods from which ALSE methods are based are provided in parenthesis.

When moisture determination has been performed, results are reported on a dry weight basis. When a reported 'less than' result is higher than the LOR, this may be due to primary sample extracts/digestion dilution and/or insufficient sample amount for analysis. Surrogate Recovery Limits are static and based on USEPA SW846 or ALS-QWI/EN38 (in the absence of specified USEPA limits). Where LOR of reported result differ from standard LOR, this may be due to high moisture, reduced sample amount or matrix interference. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number, LOR = Limit of Reporting. * Indicates failed Surrogate Recoveries.



Analytical Results

Analyte	CAS number	LOR	Client Sample ID :		E012	E016 (117P)	E016 (118PGC)	E019 (119PGC)	E021
			Sample Matrix	Type / Description					
			Sample Date / Time :	Sample Date / Time :	4 Oct 2007 15:00	4 Oct 2007 15:00	5 Oct 2007 15:00	5 Oct 2007 15:00	
			Laboratory Sample ID :	Laboratory Sample ID :	EB0711541-001	EB0711541-002	EB0711541-003	EB0711541-004	EB0711541-005
			Units	Units					
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		482	206	409	409	430
Total Alkalinity as CaCO3		1	mg/L		482	206	409	409	430
ED040F: Dissolved Major Anions									
Sulphate as SO4 2-	14808-79-8	1	mg/L		78	317	43	43	54
ED045P: Chloride by PC Titrator									
Chloride	16887-00-6	1	mg/L		1330	3270	402	402	659
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		65	319	38	38	74
Magnesium	7439-95-4	1	mg/L		117	164	40	40	31
Sodium	7440-23-5	1	mg/L		795	1620	338	338	507
Potassium	7440-09-7	1	mg/L		6	14	4	4	6
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.002	0.002	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	0.0010	0.0010	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.004	0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		0.009	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		0.002	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		0.014	0.009	0.011	0.011	0.046
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions		0.01	meq/L		49.8	43.2	20.4	20.4	28.3
Total Cations		0.01	meq/L		49.5	41.2	19.9	19.9	28.5
Ionic Balance		0.01	%		0.24	2.26	1.22	1.22	0.28



Analytical Results

Analyte	CAS number	LOR	Units	Client Sample ID :		109P (E003)	(E014) 111PGC UPPER	(E014) 111PGC LOWER	113PGC A	113PGC B
				Sample Matrix Type / Description : Sample Date / Time :	Laboratory Sample ID :					
ED037P: Alkalinity by PC Titrator										
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	108	527	411	413	413	413	453
Total Alkalinity as CaCO3		1	mg/L	108	527	411	413	413	413	453
ED040F: Dissolved Major Anions										
Sulphate as SO4 2-	14808-79-8	1	mg/L	15	318	129	342	342	342	184
ED045P: Chloride by PC Titrator										
Chloride	16887-00-6	1	mg/L	68	1920	1250	1620	1620	1620	1190
ED093F: Dissolved Major Cations										
Calcium	7440-70-2	1	mg/L	6	289	147	190	190	190	131
Magnesium	7439-95-4	1	mg/L	1	211	50	180	180	180	100
Sodium	7440-23-5	1	mg/L	88	886	791	889	889	889	748
Potassium	7440-09-7	1	mg/L	2	12	10	9	9	9	8
EG020F: Dissolved Metals by ICP-MS										
Arsenic	7440-38-2	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.008
Copper	7440-50-8	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	0.002	<0.001	0.002	0.001	0.001	0.001	<0.001
Zinc	7440-66-6	0.005	mg/L	0.011	0.005	0.021	0.008	0.008	0.008	0.022
EG035F: Dissolved Mercury by FIMS										
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance										
Total Anions		0.01	meq/L	4.39	71.3	46.0	61.1	61.1	61.1	46.5
Total Cations		0.01	meq/L	4.28	70.6	46.1	63.2	63.2	63.2	47.5
Ionic Balance		0.01	%	1.36	0.46	0.03	1.68	1.68	1.68	1.10

Page Number : 5 of 5
Client : SINCLAIR KNIGHT MERZ
Work Order : EB0711541



Surrogate Control Limits

- No surrogates present on this report.