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Accreditation Number: 1645  
Accreditation Number: 14278

Adelaide Resources  
69 King William St  
Unley SA 5061  
Australia

Attention: Barbara Anderson

Project 08ENME0027199  
Client Reference ROVER  
Order Number 10753  
Received Date 08/10/2008 11:36:00 AM

Customer Sample ID			1-A-D	2-A-D	3-A-D
Sample Matrix			WATER	WATER	WATER
Labmark Sample No.			1208024	1208025	1208026
Date Sampled			07/10/2008	07/10/2008	07/10/2008
Metals					
Test/Reference	PQL	Unit			
<b>5900 Hardness (Calc)</b>					
Total Hardness as a CaCO <sub>3</sub>	0.7	mg/L as CaCO <sub>3</sub>	610	170	490
<b>3100 Dissolved Metals in Water By ICP/MS</b>					
Antimony	1	µg/L	<1	<1	<1
Arsenic	5	µg/L	<5	<5	<5
Barium	5	µg/L	65	57	34
Boron	5	µg/L	890	1400	2600
Cadmium	2	µg/L	<2	<2	<2
Chromium	5	µg/L	<5	6.4	7.8
Copper	5	µg/L	<5	<5	<5
Lead	5	µg/L	<5	<5	<5
Manganese	5	µg/L	<5	<5	<5
Molybdenum	5	µg/L	<5	<5	8.8
Nickel	5	µg/L	<5	<5	<5
Selenium	5	µg/L	11	12	20
<b>3400 Dissolved Mercury in Water by FIMS</b>					
Mercury	0.1	µg/L	<0.1	<0.1	<0.1
<b>3200 Dissolved Metals in Water - ICP/AES</b>					
Calcium	100	µg/L	56800	18800	49600
Inorganics					
Test/Reference	PQL	Unit			
<b>4270 Total Cyanide in Water Colourmetric</b>					
Total Cyanide	0.005	mg/L	0.01	0.01	0.01
<b>4000 pH in Water</b>					
pH	0.1	pH	7.7	7.3	7.6
<b>4110 Dissolved Solids in Water</b>					
Total Dissolved Solids	20	mg/L	1700	1900	3200
<b>4300 Anions in Water by IC</b>					
Fluoride	0.5	mg/L	2.5	1.9	3.1
Nitrate	0.5	mg/L	120	110	130
Nitrite	0.5	mg/L	<0.5	<0.5	<0.5
Micro					
Test/Reference	PQL	Unit			
<b>6621 E. coli by MPN</b>					
E. coli	-	MPN/100mL	<1	<1	<1
<b>6621 Total Coliforms by MPN</b>					
Total Coliforms	-	MPN/100mL	>2400	2000	130

<b>Customer Sample ID</b>	<b>1-A-D</b>	<b>2-A-D</b>	<b>3-A-D</b>
<b>Sample Matrix</b>	<b>WATER</b>	<b>WATER</b>	<b>WATER</b>
<b>Labmark Sample No.</b>	<b>1208024</b>	<b>1208025</b>	<b>1208026</b>
<b>Date Sampled</b>	<b>07/10/2008</b>	<b>07/10/2008</b>	<b>07/10/2008</b>
<b>Micro</b>			
Test/Reference	PQL	Unit	

#### 6631 Heterotrophic Colony Count 36°C

AS/NZS 4276.3.1:2007

Heterotrophic Colony Count 36°C 44 hours	-	CFU/mL	140	4200	140
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#### Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
3100 Dissolved Metals in Water By ICP/MS	08/10/2008	10/10/2008
3200 Dissolved Metals in Water - ICP/AES	08/10/2008	09/10/2008
3400 Dissolved Mercury in Water by FIMS	09/10/2008	10/10/2008
4000 pH in Water		09/10/2008
4110 Dissolved Solids in Water		16/10/2008
4270 Total Cyanide in Water Colourmetric	09/10/2008	09/10/2008
4300 Anions in Water by IC		14/10/2008
5900 Hardness (Calc)		09/10/2008
6621 E. coli by MPN		09/10/2008
6621 Total Coliforms by MPN		09/10/2008
6631 Heterotrophic Colony Count 36°C		10/10/2008

#### Test Description

##### 4000 pH in Water

As noted in LM-FOR-ADM-020 pH should be tested in the field, therefore this test has been analysed in the laboratory outside Holding Times

##### 6631 Heterotrophic Colony Count 36°C

36°C - Pour Plate using Yeast Extract Agar

## Labmark Internal Quality Control Review

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. Matrix spike recoveries are calculated on an 'As Received' basis; the parent sample result is moisture corrected after the % recovery is determined.
3. Proficiency trial results are available on request.
4. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spike or surrogate recoveries.
6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.
9. Samples were analysed on an as received basis.
10. This report replaces any interim results previously issued.

### Holding Times

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitability qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

**\*\*NOTE:** pH duplicates are reported as a range NOT as an RPD

### Quality Control Results

Laboratory: **EN\_METALS**

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1208397 [ Method Blank ]							
3200 Dissolved Metals in Water - ICP/AES							
Calcium	µg/L	<100			< 100	T	
Magnesium	µg/L	<100			< 100	T	
1208419 [ Method Blank ]							
3100 Dissolved Metals in Water By ICP/MS							
Antimony	µg/L	<1			< 1	T	
Arsenic	µg/L	<5			< 5	T	
Barium	µg/L	<5			< 5	T	
Boron	µg/L	<5			< 5	T	
Cadmium	µg/L	<2			< 2	T	
Chromium	µg/L	<5			< 5	T	
Copper	µg/L	<5			< 5	T	
Lead	µg/L	<5			< 5	T	
Manganese	µg/L	<5			< 5	T	
Molybdenum	µg/L	<5			< 5	T	
Nickel	µg/L	<5			< 5	T	
Selenium	µg/L	<5			< 5	T	
Zinc	µg/L	<5			< 5	T	
1210163 [ Method Blank ]							
3400 Dissolved Mercury in Water by FIMS							
Mercury	µg/L	<0.1			< 0.1	T	

Laboratory: **EN\_METALS**

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1208420 [ Laboratory Control Sample ]							
3100 Dissolved Metals in Water By ICP/MS			Expected Value	Percent Recovery			
Antimony	µg/L	100	100.0	100	80-120 %	T	
Arsenic	µg/L	93	100.0	93	80-120 %	T	
Barium	µg/L	100	100.0	101	80-120 %	T	
Boron	µg/L	96	100.0	96	80-120 %	T	
Cadmium	µg/L	99	100.0	99	80-120 %	T	
Chromium	µg/L	98	100.0	98	80-120 %	T	
Copper	µg/L	92	100.0	92	80-120 %	T	
Lead	µg/L	100	100.0	102	80-120 %	T	
Manganese	µg/L	95	100.0	95	80-120 %	T	
Molybdenum	µg/L	96	100.0	96	80-120 %	T	
Nickel	µg/L	94	100.0	94	80-120 %	T	
Selenium	µg/L	92	100.0	92	80-120 %	T	
Zinc	µg/L	93	100.0	93	80-120 %	T	
1210164 [ Laboratory Control Sample ]							
3400 Dissolved Mercury in Water by FIMS			Expected Value	Percent Recovery			
Mercury	µg/L	9.6	10.0	96	80-120 %	T	

Laboratory: **EN\_WATERS**

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1209541 [ Method Blank ]							
4270 Total Cyanide in Water Colourmetric							
Total Cyanide	mg/L	0.01			< 0.005	F	
1209923 [ Method Blank ]							
4300 Anions in Water by IC							
Bromide	mg/L	<0.5			< 0.5	T	
Chloride	mg/L	<0.5			< 0.5	T	
Fluoride	mg/L	<0.5			< 0.5	T	
Nitrate	mg/L	<0.5			< 0.5	T	
Nitrite	mg/L	<0.5			< 0.5	T	
Orthophosphate as P	mg/L	<0.5			< 0.5	T	
Sulphate	mg/L	<0.5			< 0.5	T	
1212734 [ Method Blank ]							
4110 Dissolved Solids in Water							
Total Dissolved Solids	mg/L	<20			< 20	T	
1209544 [ Laboratory Control Sample ]							
4270 Total Cyanide in Water Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/L	0.09	0.1	92	75-125 %	T	
1209700 [ Laboratory Control Sample ]							
4000 pH in Water			Expected Value	Percent Recovery			
pH	pH	7.4	N/A	N/A	N/A	N/A	
1209925 [ Laboratory Control Sample ]							
4300 Anions in Water by IC			Expected Value	Percent Recovery			
Bromide	mg/L	100	100.0	103	80-120 %	T	
Chloride	mg/L	100	100.0	102	80-120 %	T	
Fluoride	mg/L	100	100.0	100	80-120 %	T	
Nitrate	mg/L	110	100.0	110	80-120 %	T	
Nitrite	mg/L	99	100.0	99	80-120 %	T	
Orthophosphate as P	mg/L	100	100.0	100	80-120 %	T	
Sulphate	mg/L	100	100.0	101	80-120 %	T	
1212735 [ Laboratory Control Sample ]							
4110 Dissolved Solids in Water			Expected Value	Percent Recovery			
Total Dissolved Solids	mg/L	970	1000.0	97	90-110 %	T	

#### Project Comments

Comments Microbiological analysis commenced at 13:50 hours.

#### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Samples correctly preserved	Yes
Organic samples had Teflon liners	Yes
Samples received with Zero Headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

#### Authorised By

Carol Cawrse	Client Services Officer	
Dianne Gray	Team Leader - Microbiology	Accreditation Number: 14278
Mark Herbstreit	Senior Analyst - Metals	Accreditation Number: 1645
Helen Lei	Senior Analyst - Waters	Accreditation Number: 1645
Niloufer Lobo	Analyst - Microbiology	Accreditation Number: 14278

#### Laboratory Manager

David Elliott Laboratory Manager - Melbourne



#### Final Report

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

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*The samples were not collected by Amdel staff.*