



Certificate of Analysis

Client: Remediation (NZ) Limited	Lab No: 1974595	SPv1
Contact: D Gibson	Date Received: 03-May-2018	
C/- Revital Fertilisers	Date Reported: 16-May-2018	
PO Box 8045	Quote No:	
New Plymouth 4342	Order No:	
	Client Reference:	
	Submitted By: D Gibson	

Interim Report

This is an interim report, prepared before all test results are completed. As all final Q.C. checks may not have been possible, it is not regarded as an official certificate of analysis. The final, official report will be issued upon completion of all tests.

Sample Type: Aqueous

Sample Name:	Lower Mimi 02-May-2018 2:00 pm	Upper Mimi 02-May-2018 2:00 pm			
Lab Number:	1974595.1	1974595.2			
Individual Tests					
pH	pH Units	7.2	7.0	-	-
Electrical Conductivity (EC)	mS/m	14.5	13.6	-	-
Total Suspended Solids	g/m ³	< 15 #1	< 15 #1	-	-
Chloride	g/m ³	13.0	12.6	-	-
Free Ammonia	g/m ³ at 20°C	< 0.010	< 0.010	-	-
Total Ammoniacal-N	g/m ³	0.043	0.044	-	-
Carbonaceous Biochemical Oxygen Demand (cBOD ₅)	g O ₂ /m ³	< 2	In Progress	-	-
Escherichia coli	MPN / 100mL	142 #2	122 #2	-	-
Total Petroleum Hydrocarbons in Water					
C7 - C9	g/m ³	< 0.06	< 0.06	-	-
C10 - C14	g/m ³	< 0.2	< 0.2	-	-
C15 - C36	g/m ³	< 0.4	< 0.4	-	-
Total hydrocarbons (C7 - C36)	g/m ³	< 0.7	< 0.7	-	-

Analyst's Comments

#1 There was insufficient sample left to filter the usual amount for the Total Suspended Solids test on samples 1974595/1&2, so the detection limit is higher than normal.

#2 Please interpret this result with caution as the sample was > 8 °C on receipt at the lab. The sample temperature is recommended by APHA to be less than 8 °C on receipt at the laboratory (but not frozen). However, it is acknowledged that samples that are transported quickly to the laboratory after sampling, may not have been cooled to this temperature.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.

Test	Method Description	Default Detection Limit	Sample No
Total Petroleum Hydrocarbons in Water	Solvent Hexane extraction, GC-FID analysis, Headspace GC-MS FS analysis US EPA 8015B/MfE Petroleum Industry Guidelines [KBIs:2803,10734;26687,3629]	0.06 - 0.7 g/m ³	1-2
Filtration, Unpreserved	Sample filtration through 0.45µm membrane filter.	-	1-2
pH	pH meter. APHA 4500-H ⁺ B 22 nd ed. 2012. Note: It is not possible to achieve the APHA Maximum Storage Recommendation for this test (15 min) when samples are analysed upon receipt at the laboratory, and not in the field. Samples and Standards are analysed at an equivalent laboratory temperature (typically 18 to 22 °C). Temperature compensation is used.	0.1 pH Units	1-2

Sample Type: Aqueous			
Test	Method Description	Default Detection Limit	Sample No
Electrical Conductivity (EC)	Conductivity meter, 25°C. APHA 2510 B 22 nd ed. 2012.	0.1 mS/m	1-2
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5µm), gravimetric determination. APHA 2540 D (modified) 22 nd ed. 2012.	3 g/m ³	1-2
Chloride	Filtered sample. Ion Chromatography. APHA 4110 B (modified) 22 nd ed. 2012.	0.5 g/m ³	1-2
Free Ammonia	Calculation from NH ₄ N, pH, Temperature (Calculations based on data for distilled water). APHA Table 8010:VI 22 nd ed. 2012.	0.010 g/m ³ at 20°C	1-2
Total Ammoniacal-N	Phenol/hypochlorite colourimetry. Flow injection analyser. (NH ₄ -N = NH ₄ ⁺ -N + NH ₃ -N). APHA 4500-NH ₃ H (modified) 22 nd ed. 2012.	0.010 g/m ³	1-2
Carbonaceous Biochemical Oxygen Demand (cBOD ₅)	Incubation 5 days, DO meter, nitrification inhibitor added, dilutions, seeded. APHA 5210 B (modified) 22 nd ed. 2012.	2 g O ₂ /m ³	1-2
C7 - C9	Head Space, GCMS analysis.	0.06 g/m ³	1-2
Escherichia coli	MPN count using Colilert , Incubated at 35°C for 24 hours. APHA 9223 B (2004), 22 nd ed. 2012.	1 MPN / 100mL	1-2

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Samples are held at the laboratory after reporting for a length of time depending on the preservation used and the stability of the analytes being tested. Once the storage period is completed the samples are discarded unless otherwise advised by the client.

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