QUALITY CONTROL REPORT

Program	: SEWMISC	Page	: 1 of 3
Client	: SEW-SD	Laboratory	: Scoresby Laboratory
Contact	: Dat Pham	Telephone	: 03 8756 8000
Project	: 25-11902	Date Samples Received	: 04-February-2025
Customer Ref	: McCrae Seepage	Issue Date	: 04-February-2025
Sampler	: Rob Kellett	No. Samples Received	: 2
Order Number	: SEW104025	No. Samples Analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal and external review. Many components of this report contribute to the overall Quality assessment.

Brief method summaries and references are also provided to assist in traceability.

Brief Method Summaries

The analytical procedures used by the Water Business have been developed from established internationally recognized procedures such as those published by the US EP A, APHA, AS and NEPM. In house developed procedures are fully validated and are often at client request. The following table provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
W-Chloride(DA)	WD045G	WATER	In-house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.Librated thiocynate forms coloured ferric thiocyanate.
W-EC	WA010	WATER	In-house: Referenced to APHA 2510 B. Conductivity is determined by ISE, either manually or automated measurement.
FLUORIDE AS F	WK040LL	WATER	In-house: Referenced to APHA 4500-F C. This method is applicable to the analysis of fluoride in fluoridated drinking water. leachates, surface and groundwater plus effluents.
NH3 as N	WK055G	WATER	In-house: Referenced to APHA 4500-NH3 G. Ammonia is determined by direct colorimetry by Discrete Analyser.
PH UNITS	WA005	WATER	In-house: Referenced to APHA 4500 H+ B. pH of water samples is determined by ISE either manually or by automated pH meter.
W-SO4-Da	WD041G	WATER	In-house: Referenced to APHA 4500-SO4. Sulfate ions are converted to a barium sulfate suspension and determined by a discrete analyser.

Analysis Holding Time Compliance

Holding times may vary depending on test and preservation used.If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.This report summarizes extraction / preparation and analysis times and compares each with ALS Water recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns.

Method / Sample Number		Extraction / Preparation			Analysis		
WD045G :W-Chloride(DA)	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓
10787182	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓
WA010 :W-EC	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Mar-2025	3-Feb-2025	✓	03-Mar-2025	03-Feb-2025	✓
10787182	03-Feb-2025	3-Mar-2025	3-Feb-2025	✓	03-Mar-2025	03-Feb-2025	✓
WK040LL :FLUORIDE AS F	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Mar-2025	3-Feb-2025	✓	03-Mar-2025	03-Feb-2025	✓
10787182	03-Feb-2025	3-Mar-2025	3-Feb-2025	✓	03-Mar-2025	03-Feb-2025	✓
WK055G :NH3 as N	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓
10787182	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓
WA005 :PH UNITS	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Feb-2025	3-Feb-2025	×	03-Feb-2025	03-Feb-2025	×
10787182	03-Feb-2025	3-Feb-2025	3-Feb-2025	×	03-Feb-2025	03-Feb-2025	×
WD041G :W-SO4-Da	Sampled Date	Due for Extraction	Date Extracted	Evaluation	Due for analysis	Date analysed	Evaluation
10787181	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓
10787182	03-Feb-2025	3-Mar-2025	4-Feb-2025	✓	03-Mar-2025	04-Feb-2025	✓

QUALITY CONTROL - DUPLICATES

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Lab ID	Client ID	Method :Compound	LOR	Unit		Sample Value	Duplicate Value	% RPD
10788386	10669577	FLUORIDE AS F: FLUORIDE	<0.05	mg/L		0.78	0.78	0.4
10788387	10694739	FLUORIDE AS F: FLUORIDE	<0.05	mg/L		0.82	0.83	1.9

Measurement of Uncertainty.

When any measurement is made there are a number of factors that affect how accurate the result is. Every step undertaken in the analysis of a sample is subject to some (small) level of error.Estimates of measurement uncertainty provide information about the relative size of the error. As such, MU is an important aspect of any result. Refer to Enviromail ™ 53 - What is Measurement Uncertainty for more information.

Analysis	Method Code	Component	Location
			MEL
FLUORIDE AS F	WK040LL	FLUORIDE	15%
W-EC	WA010	EC	5%

Analysis	Method Code	Component	Location
			MEL
NH3 as N	WK055G	AMMONIA_DA	14%
W-Chloride(DA)	WD045G	W-CHLORIDE(DA)	16%