



SW1



SW1



SW2



SW2

	DITCH
	DITCH

APPENDIX VI
Laboratory Certificates of Analysis



FINAL REPORT

CA15172-MAY24 R1

304108.003-McGarry Landfill SW COL #3,

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Pinchin Ltd	Project Specialist	Brad Moore Hon. B.Sc
Address	662 Falconbridge Rd, Unit 3 Sudbury, ON P3A 4S4, Canada	Laboratory	SGS Canada Inc.
Contact	Greg Way	Address	185 Concession St., Lakefield ON, K0L 2H0
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Facsimile		Facsimile	705-652-6365
Email	gway@Pinchin.com	Email	brad.moore@sgs.com
Project	304108.003-McGarry Landfill SW COL #3.	SGS Reference	CA15172-MAY24
Order Number		Received	05/17/2024
Samples	Surface Water (3)	Approved	05/28/2024
		Report Number	CA15172-MAY24 R1
		Date Reported	05/28/2024

COMMENTS

Temperature of Sample upon Receipt: 10 degrees C

SIGNATORIES

Brad Moore Hon. B.Sc





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FINAL REPORT

CA15172-MAY24 R1

Client: Pinchin Ltd

Project: 304108.003-McGarry Landfill SW COL #3,

Project Manager: Greg Way

Samplers: Katie Rinaldi

MATRIX: WATER

L1 = PWDOO_L / WATER / ... Table 2 - General - July 1999 PIBS 3303E

Parameter

General Chemistry

Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result
Biochemical Oxygen Demand (BOD5)	mg/L	2			SW1	15/05/2024	< 41	< 41	16
Total Suspended Solids	mg/L	2			SW2	15/05/2024	6	3	17
Alkalinity	mg/L as CaCO3	2			Surface Water	15/05/2024	3	30	3
Conductivity	uS/cm	2			Surface Water	15/05/2024	51	65	16
Total Dissolved Solids	mg/L	30			Surface Water	15/05/2024	37	37	< 30
Chemical Oxygen Demand	mg/L	8			Surface Water	15/05/2024	20	26	33
Ammonia+Ammonium (N)	as N mg/L	0.04			Surface Water	15/05/2024	< 0.04	< 0.04	0.04
Total Kjeldahl Nitrogen (N)	as N mg/L	0.05			Surface Water	15/05/2024	0.24	0.39	0.45

Metals and Inorganics

Sulphate	mg/L	2			SW1	15/05/2024	2	< 2	< 2
Nitrite (as N)	as N mg/L	0.03			SW2	15/05/2024	< 0.03	< 0.03	< 0.03
Nitrate (as N)	as N mg/L	0.06			Surface Water	15/05/2024	< 0.06	< 0.06	< 0.06
Arsenic (total)	mg/L	0.0002	0.005		Surface Water	15/05/2024	0.0005	0.0006	0.0003
Barium (total)	mg/L	0.00002			Surface Water	15/05/2024	0.00411	0.00705	0.00263
Boron (total)	mg/L	0.002	0.2		Surface Water	15/05/2024	< 0.002	< 0.002	0.003
Cadmium (total)	mg/L	0.000003	0.0001		Surface Water	15/05/2024	0.000031	0.000024	0.000124
Chromium (total)	mg/L	0.00008	0.1		Surface Water	15/05/2024	0.000089	0.00132	0.00084
Copper (total)	mg/L	0.001	0.001		Surface Water	15/05/2024	0.002	0.002	0.002
Iron (total)	mg/L	0.007	0.3		Surface Water	15/05/2024	0.322	0.357	0.143
Phosphorus (total)	mg/L	0.003	0.01		Surface Water	15/05/2024	0.013	0.020	0.092
Lead (total)	mg/L	0.00009	0.005		Surface Water	15/05/2024	0.00027	0.00017	0.00011



FINAL REPORT

CA15172-MAY24 R1

Client: Pinchin Ltd

Project: 304108.003-McGarry Landfill SW COL #3,

Project Manager: Greg Way

Samplers: Katie Rinhd

MATRIX: WATER

L1 = PWOO_L / WATER / - - Table 2 - General - July 1999 PIGS 3303E

Parameter	Units	RL	L1	Sample Number	Sample Name	Sample Matrix	Sample Date	Result	Result	Result
Metals and Inorganics (continued)										
Zinc (total)	mg/L	0.002	0.02	6	SW1	Surface Water	15/05/2024	0.006	0.003	0.017
Other (ORP)										
pH	No unit	0.05	0.1	6	SW1	Surface Water	15/05/2024	6.26	7.30	6.27
Chloride	mg/L	1	8.6	13	SW2	Surface Water	15/05/2024	< 0.00001	4	< 1
Mercury (dissolved)	mg/L	0.00001	0.0002	< 0.00001	SW1	Surface Water	15/05/2024	< 0.00001	< 0.00001	< 0.00001
Phenols										
4AAP-Phenolics	mg/L	0.001	0.001	0.002	SW1	Surface Water	15/05/2024	0.002	0.003	0.004

EXCEEDANCE SUMMARY

PWQO_L / WATER

/ - - Table 2 -

General - July 1999

PIBS 3303E

L1

Parameter	Method	Units	Result
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SW1

Copper	SM 3030/EPA 200.8	mg/L	0.002	0.001
Iron	SM 3030/EPA 200.8	mg/L	0.322	0.3
Phosphorus	SM 3030/EPA 200.8	mg/L	0.013	0.01
pH	SM 4500	No unit	6.26	0.1
4AAP-Phenolics	SM 5530B-D	mg/L	0.002	0.001

SW2

Copper	SM 3030/EPA 200.8	mg/L	0.002	0.001
Iron	SM 3030/EPA 200.8	mg/L	0.357	0.3
Phosphorus	SM 3030/EPA 200.8	mg/L	0.020	0.01
4AAP-Phenolics	SM 5530B-D	mg/L	0.003	0.001

Ditch

Cadmium	SM 3030/EPA 200.8	mg/L	0.000124	0.0001
Copper	SM 3030/EPA 200.8	mg/L	0.002	0.001
Phosphorus	SM 3030/EPA 200.8	mg/L	0.092	0.01
pH	SM 4500	No unit	6.27	0.1
4AAP-Phenolics	SM 5530B-D	mg/L	0.004	0.001



FINAL REPORT

CA15172-MAY24 R

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Alkalinity	EWL0501-MAY24	mg/L as CaCO ₃	2	<2	0	20	91	80	120	NA		

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ammonia+Ammonium (N)	SKA0192-MAY24	mg/L	0.04	<0.04	ND	10	100	90	110	88	75	125



FINAL REPORT

CA15172-MAY24 R

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chloride	DIO8073-MAY24	mg/L	1	<1	3	20	93	80	120	96	75	125
Sulphate	DIO8073-MAY24	mg/L	2	<2	1	20	99	80	120	100	75	125

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nitrite (as N)	DIO0475-MAY24	mg/L	0.03	<0.03	ND	20	98	90	110	103	75	125
Nitrate (as N)	DIO0475-MAY24	mg/L	0.06	<0.06	ND	20	97	90	110	98	75	125



FINAL REPORT

CA15172-MAY24 R

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0036-MAY24	mg/L	2	<2	16	30	107	70	130	85	70	130

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chemical Oxygen Demand	EWL0509-MAY24	mg/L	8	<8	5	20	96	80	120	90	75	125

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Conductivity	EWL0501-MAY24	uS/cm	2	<2	0	20	99	90	110	NA		



FINAL REPORT

CA15172-MAY24 I

QC SUMMARY

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Spike Recovery (%)	Recovery Limits (%)
Mercury (dissolved)	EHG0040-MAY24	mg/L	0.00001	<0.00001	ND	20	113	80	120	114	70	130

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Spike Recovery (%)	Recovery Limits (%)
Arsenic (total)	EMS0247-MAY24	mg/L	0.0002	<0.0002	7	20	102	90	110	108	70	130
Barium (total)	EMS0247-MAY24	mg/L	0.00002	<0.00008	7	20	94	90	110	103	70	130
Boron (total)	EMS0247-MAY24	mg/L	0.002	<0.002	0	20	98	90	110	98	70	130
Cadmium (total)	EMS0247-MAY24	mg/L	0.000003	<0.000003	2	20	99	90	110	101	70	130
Chromium (total)	EMS0247-MAY24	mg/L	0.00008	<0.00008	8	20	104	90	110	116	70	130
Copper (total)	EMS0247-MAY24	mg/L	0.001	<0.001	2	20	102	90	110	107	70	130
Iron (total)	EMS0247-MAY24	mg/L	0.007	<0.007	1	20	98	90	110	75	70	130
Lead (total)	EMS0247-MAY24	mg/L	0.00009	<0.00009	ND	20	96	90	110	98	70	130
Phosphorus (total)	EMS0247-MAY24	mg/L	0.003	<0.003	6	20	95	90	110	NV	70	130
Zinc (total)	EMS0247-MAY24	mg/L	0.002	<0.002	4	20	103	90	110	97	70	130



FINAL REPORT

CA15172-MAY24 F

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
pH	EWL0501-MAY24	No unit	0.05	NA	0		101	Low High	NA	Low High

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
4AAP-Phenolics	SKA0202-MAY24	mg/L	0.001	<0.001	0	10	103	80 120	87	75 125

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-IENVIEWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Dissolved Solids	EWL0498-MAY24	mg/L	30	<30	5	20	94	80 120	NA	
Total Dissolved Solids	EWL0500-MAY24	mg/L	30	<30	4	20	95	80 120	NA	



FINAL REPORT

CA15172-MAY24 F

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Total Suspended Solids	EWL0476-MAY24	mg/L	2	< 2	1	10	97	90	110	NA	Low	High
Total Suspended Solids	EWL0482-MAY24	mg/L	2	< 2	1	10	98	90	110	NA	Low	High

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Total Kjeldahl Nitrogen (N)	SKA0190-MAY24	mg/L	0.05	<0.05	1	10	101	90	110	108	75	125
Total Kjeldahl Nitrogen (N)	SKA0204-MAY24	mg/L	0.05	<0.05	ND	10	100	90	110	91	75	125



FINAL REPORT

CA15172-MAY24 R

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spiked Blank: Laboratory control sample or spiked blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

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This report supersedes all previous versions.

-- End of Analytical Report --



FINAL REPORT

CA15173-MAY24 R1

304108.003, McGarry Landfill GW COL #1

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Pinchin Ltd	Project Specialist	Maarit Wolfe, Hon.B.Sc
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Project	304108.003, McGarry Landfill GW COL #1	SGS Reference	CA15173-MAY24
Order Number		Received	05/17/2024
Samples	Ground Water (8)	Approved	05/31/2024
		Report Number	CA15173-MAY24 R1
		Date Reported	05/31/2024

COMMENTS

Temperature of Sample upon Receipt: 10 degrees C

Cooling Agent Present: Yes

Custody Seal Present: Yes

Chain of Custody Number: NA

SIGNATORIES

Maarit Wolfe, Hon.B.Sc



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FINAL REPORT

CA15173-MAY24 R1

Client: Pinchin Ltd

Project: 304108.003, McGarry Landfill GW COL #1

Project Manager: Greg Way

Samplers: Alana Valle

MATRIX: WATER

L1 = QOWS_AO_OG / WATER / ... Table 4 - Drinking Water - Reg O.189_03

L2 = QOWS_MAC / WATER / ... Table 1,2 and 3 - Drinking Water - Reg O.189_03

Parameter	Units	RL	L1	L2	Sample Number	7	8	9	10	11	12	13	14
Benzene	µg/L	0.5		1									
Toluene	µg/L	0.5		60									

BTEX

General Chemistry

Biochemical Oxygen Demand (BOD5)	mg/L	2											
Total Suspended Solids	mg/L	2				64200	66300	820	40	115	10	1070	6
Alkalinity	mg/L as CaCO3	2	500			10	16	7	402	26	24	2	25
Conductivity	µS/cm	2				21	37	21	868	53	48	19	48
Total Dissolved Solids	mg/L	30	500			69	54	< 30	557	40	< 30	< 30	63
Chemical Oxygen Demand	mg/L	8				< 8	< 8	< 8	18	< 8	< 8	12	< 8
Total Kjeldahl Nitrogen (N)	as N mg/L	0.05				0.06	0.05	0.07	0.98	< 0.05	< 0.05	0.16	< 0.05
Ammonia+Ammonium (N)	as N mg/L	0.04				0.06	0.10	< 0.04	0.72	0.07	< 0.04	0.05	< 0.04
Dissolved Organic Carbon	mg/L	1	5			2	1	2	6	1	1	3	1

Metals and Inorganics

Phosphorus (total)	mg/L	0.03				15.0	10.2	0.81	0.06	0.04	< 0.03	0.16	< 0.03
Sulphate	mg/L	2	500			9	19	2	100	5	< 2	4	< 2
Nitrite (as N)	as N mg/L	0.03		1		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Nitrate (as N)	as N mg/L	0.06		10		< 0.06	< 0.06	0.14	< 0.06	< 0.06	< 0.06	0.46	< 0.06
Arsenic (dissolved)	mg/L	0.0002		0.01		< 0.0002	< 0.0002	< 0.0002	0.0859	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Barium (dissolved)	mg/L	0.00008		1		0.00060	0.00075	0.0107	0.0701	0.00080	0.00174	0.00888	0.00165
Boron (dissolved)	mg/L	0.002		5		0.003	0.016	< 0.002	2.04	0.007	0.005	0.003	0.005
Calcium (dissolved)	mg/L	0.01				2.60	2.22	2.46	164	7.60	8.39	0.91	8.13



FINAL REPORT

CA15173-MAY24 R1

Client: Pinchin Ltd

Project: 304108 003, McGarry Landfill GW COL #1

Project Manager: Greg Way

Samplers: Alana Valle

MATRIX: WATER

L1 = ODWS_AO_OG / WATER / - - Table 4 - Drinking Water - Reg O.188_03

L2 = ODWS_MAC / WATER / - - Table 1,2 and 3 - Drinking Water - Reg O.188_03

Parameter

Units	RL	L1	L2	Sample Number	7	8	9	10	11	12	13	14
Sample Name	Sample Matrix	Sample Date	Sample Date	Sample Date	MW1	MW2	MW3	MW4	MW5	MW7	MW8	GW DUP
Cadmium (dissolved)	mg/L	0.000003	0.005	0.000003	0.000003	< 0.000003	0.000006	0.000101	0.000005	0.000005	0.000014	0.000006
Chromium (dissolved)	mg/L	0.00008	0.05	0.00062	0.00062	0.00022	0.00042	0.00100	0.00204	0.00024	0.00062	0.00026
Copper (dissolved)	mg/L	0.001	1	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
Iron (dissolved)	mg/L	0.007	0.3	0.030	0.030	0.008	< 0.007	19.4	< 0.007	0.019	0.036	0.019
Potassium (dissolved)	mg/L	0.009		0.308	0.308	0.250	0.716	6.62	0.392	0.065	0.067	0.061
Magnesium (dissolved)	mg/L	0.001		0.661	0.661	0.642	0.533	18.9	1.65	1.31	0.343	1.30
Manganese (dissolved)	mg/L	0.00001	0.05	0.00064	0.00064	0.00137	0.0233	1.81	0.00070	0.0677	0.0129	0.0669
Sodium (dissolved)	mg/L	0.01	200	1.26	1.26	2.04	0.98	9.74	1.47	1.00	1.95	1.00
Lead (dissolved)	mg/L	0.00009	0.01	< 0.00009	< 0.00009	< 0.00009	< 0.00009	0.00283	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Zinc (dissolved)	mg/L	0.002	5	< 0.002	< 0.002	< 0.002	< 0.002	0.045	< 0.002	< 0.002	< 0.002	< 0.002
Other (ORP)												
pH	No unit	0.05	8.5	6.81	6.81	6.88	6.68	7.58	7.22	6.95	5.90	7.36
Chloride	mg/L	1	250	2	2	12	< 1	1	< 1	< 1	< 1	< 1
Mercury (total)	mg/L	0.00001		< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001



FINAL REPORT

CA15173-MAY24 R1

Client: Pinchin Ltd

Project: 304108.003, McGarry Landfill GW COL #1

Project Manager: Greg Way

Samplers: Alana Valle

MATRIX: WATER

L1 = ODWS_AQ_OG / WATER / ... Table 4 - Drinking Water - Reg O.189.03

L2 = ODWS_MAC / WATER / ... Table 1.2 and 3 - Drinking Water - Reg O.189.03

Parameter

Phenols

Units	RL	L1	L2	Sample Number	Sample Name	Sample Matrix	Sample Date	7	8	9	10	11	12	13	14
mg/L	0.002				MW1	Ground Water	15/05/2024	Result	Result	Result	Result	Result	Result	Result	Result
4AAP-Phenolics								0.002	0.002	0.003	< 0.002	0.003	0.003	< 0.002	< 0.002

VOCs

1,4-Dichlorobenzene	µg/L	0.5						< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichloromethane	µg/L	0.5						< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl Chloride	µg/L	0.2						< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

EXCEEDANCE SUMMARY

				ODWS_AO_OG / WATER / - - Table 4 - Drinking Water - Reg O.169_03	ODWS_MAC / WATER / - - Table 1,2 and 3 - Drinking Water - Reg O.169_03
Parameter	Method	Units	Result	L1	L2
MW4					
Total Dissolved Solids	SM 2540C	mg/L	557	500	0.01
Arsenic (dissolved)	SM 3030/EPA 200.8	mg/L	0.0859		
Iron (dissolved)	SM 3030/EPA 200.8	mg/L	19.4	0.3	
Manganese (dissolved)	SM 3030/EPA 200.8	mg/L	1.81	0.05	
Dissolved Organic Carbon	SM 5310	mg/L	6	5	
MW7					
Manganese (dissolved)	SM 3030/EPA 200.8	mg/L	0.0677	0.05	
GW DUP					
Manganese (dissolved)	SM 3030/EPA 200.8	mg/L	0.0669	0.05	



FINAL REPORT

CA15173-MAY24 F

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Alkalinity	EWL0501-MAY24	mg/L as CaCO ₃	2	< 2	0	20	91	80	120	NA		

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ammonia+Ammonium (N)	SKA0203-MAY24	mg/L	0.04	<0.04	2	10	102	90	110	95	75	125



FINAL REPORT

CA15173-MAY24

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-028

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Chloride	DIO8070-MAY24	mg/L	1	<1	ND	20	98	80	120	99	75	125
Sulphate	DIO8070-MAY24	mg/L	2	<2	1	20	113	80	120	109	75	125
Chloride	DIO8071-MAY24	mg/L	1	<1	ND	20	97	80	120	100	75	125
Sulphate	DIO8072-MAY24	mg/L	2	<2	0	20	98	80	120	98	75	125

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVIEWIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Nitrite (as N)	DIO0477-MAY24	mg/L	0.03	<0.03	ND	20	98	90	110	100	75	125
Nitrate (as N)	DIO0477-MAY24	mg/L	0.06	<0.06	1	20	97	90	110	90	75	125



FINAL REPORT

CA15173-MAY24 R

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-TENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0036-MAY24	mg/L	2	< 2	16	30	107	70	130	85	70	130

Carbon by SFA

Method: SM 5310 | Internal ref.: ME-CA-TENVISFA-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Dissolved Organic Carbon	SKA0198-MAY24	mg/L	1	<1	ND	20	101	90	110	85	75	125

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-TENVIEWL-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chemical Oxygen Demand	EWL0509-MAY24	mg/L	8	<8	5	20	96	80	120	90	75	125



FINAL REPORT

CA15173-MAY24 R

QC SUMMARY

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Conductivity	EWL0501-MAY24	uS/cm	2	< 2	0	20	99	Low 90	High 110	NA	Low	High

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Mercury (total)	EHG0043-MAY24	mg/L	0.00001	< 0.00001	ND	20	110	Low 80	High 120	109	Low 70	High 130



FINAL REPORT

CA15173-MAY24 R

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-JENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Arsenic (dissolved)	EMS0200-MAY24	mg/L	0.0002	<0.0002	ND	20	101	90	110	97	70	130
Barium (dissolved)	EMS0200-MAY24	mg/L	0.00008	<0.00008	ND	20	100	90	110	102	70	130
Boron (dissolved)	EMS0200-MAY24	mg/L	0.002	<0.002	ND	20	104	90	110	98	70	130
Calcium (dissolved)	EMS0200-MAY24	mg/L	0.01	<0.01	ND	20	99	90	110	100	70	130
Cadmium (dissolved)	EMS0200-MAY24	mg/L	0.000003	<0.000003	ND	20	103	90	110	104	70	130
Chromium (dissolved)	EMS0200-MAY24	mg/L	0.00008	<0.00008	ND	20	104	90	110	99	70	130
Copper (dissolved)	EMS0200-MAY24	mg/L	0.001	<0.001	ND	20	102	90	110	100	70	130
Iron (dissolved)	EMS0200-MAY24	mg/L	0.007	<0.007	ND	20	99	90	110	100	70	130
Potassium (dissolved)	EMS0200-MAY24	mg/L	0.009	<0.009	0	20	100	90	110	74	70	130
Magnesium (dissolved)	EMS0200-MAY24	mg/L	0.001	<0.001	0	20	101	90	110	99	70	130
Manganese (dissolved)	EMS0200-MAY24	mg/L	0.00001	<0.00001	ND	20	103	90	110	107	70	130
Sodium (dissolved)	EMS0200-MAY24	mg/L	0.01	<0.01	1	20	99	90	110	85	70	130
Lead (dissolved)	EMS0200-MAY24	mg/L	0.00009	<0.00009	ND	20	101	90	110	99	70	130
Zinc (dissolved)	EMS0200-MAY24	mg/L	0.002	<0.002	ND	20	103	90	110	105	70	130
Boron (dissolved)	EMS0279-MAY24	mg/L	0.002	<0.002	ND	20	98	90	110	95	70	130



FINAL REPORT

CA15173-MAY24 R

QC SUMMARY

pH

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low High	Spike Recovery (%)	Recovery Limits (%) Low High
pH	EWL0501-MAY24	No unit	0.05	NA	0		101		NA	

Phenols by SFA

Method: SM 5530B-D I Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low High	Spike Recovery (%)	Recovery Limits (%) Low High
4AAP-Phenolics	SKA0202-MAY24	mg/L	0.002	<0.002	0	10	103	80 120	87	75 125

Phosphorus by SFA

Method: SM 4500-P J I Internal ref.: ME-CA-IENVISFA-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low High	Spike Recovery (%)	Recovery Limits (%) Low High
Phosphorus (total)	SKA0206-MAY24	mg/L	0.03	<0.03	ND	10	101	90 110	98	75 125
Phosphorus (total)	SKA0216-MAY24	mg/L	0.03	<0.03	4	10	100	90 110	103	75 125



FINAL REPORT

CA15173-MAY24 F

QC SUMMARY

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-IENVIEWWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
Total Dissolved Solids	EWL0498-MAY24	mg/L	30	<30	5	20	94	80	120	NA	
Total Dissolved Solids	EWL0504-MAY24	mg/L	30	<30	ND	20	102	80	120	NA	

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
Total Suspended Solids	EWL0508-MAY24	mg/L	2	< 2	2	10	101	90	110	NA	



FINAL REPORT

CA15173-MAY24 F

QC SUMMARY

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Total Kjeldahl Nitrogen (N)	SKA0204-MAY24	mg/L	0.05	<0.05	ND	10	100	90	110	91	75	125
Total Kjeldahl Nitrogen (N)	SKA0213-MAY24	mg/L	0.05	<0.05	1	10	100	90	110	100	75	125

Volatile Organics

Method: EPA 5030B/8280C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
1,4-Dichlorobenzene	GCM0364-MAY24	µg/L	0.5	<0.5	ND	30	98	60	130	100	50	140
Benzene	GCM0364-MAY24	µg/L	0.5	<0.5	ND	30	103	60	130	105	50	140
Dichloromethane	GCM0364-MAY24	µg/L	0.5	<0.5	ND	30	101	60	130	107	50	140
Toluene	GCM0364-MAY24	µg/L	0.5	<0.5	ND	30	102	60	130	103	50	140
Vinyl Chloride	GCM0364-MAY24	µg/L	0.2	<0.2	ND	30	98	50	140	100	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

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This report supersedes all previous versions.

-- End of Analytical Report --



FINAL REPORT

CA15228-JUL24 R1

304108.003 McGarry Landfill SW

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS

Client **Pinchin Ltd**

Address **662 Falconbridge Rd, Unit 3, Sudbury
Canada, P3A 4S4
Phone: 705-521-0560 cell: 705-618-0186.**

Contact **Greg Way**

Telephone **705-521-0560 cell: 705-618-0186**

Facsimile

Email **gway@Pinchin.com**

Project **304108.003 McGarry Landfill SW**

Order Number

Samples **Surface Water (3)**

LABORATORY DETAILS

Project Specialist **Maarit Wolfe, Hon.B.Sc**

Laboratory **SGS Canada Inc.**

Address **185 Concession St., Lakefield ON, K0L 2H0**

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SGS Reference **CA15228-JUL24**

Received **07/24/2024**

Approved **08/08/2024**

Report Number **CA15228-JUL24 R1**

Date Reported **08/08/2024**

COMMENTS

Temperature of Sample upon Receipt: 4 degrees C

SIGNATORIES

Maarit Wolfe, Hon.B.Sc



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FINAL REPORT

CA15228-JUL24 R1

Client: Pinchin Ltd
Project: 304108.003 McGarry Landfill SW
Project Manager: Greg Way
Samplers: Abigail Redmond

MATRIX: WATER

Sample Number	6	7	8
Sample Name	SW1	SW2	Ditch
Sample Matrix	Surface Water	Surface Water	Surface Water
Sample Date	23/07/2024	23/07/2024	23/07/2024

Parameter	Units	RL	Result	Result	Result
General Chemistry					
Biochemical Oxygen Demand (BOD5)	mg/L	2	4	< 4.1	< 4.1
Total Suspended Solids	mg/L	2	3	8	6
Alkalinity	mg/L as CaCO3	2	7	14	2
Conductivity	uS/cm	2	52	88	16
Total Dissolved Solids	mg/L	30	80	131	60
Chemical Oxygen Demand	mg/L	8	41	28	57
Ammonia+Ammonium (N)	as N mg/L	0.04	0.11	0.06	0.04
Total Kjeldahl Nitrogen (N)	as N mg/L	0.05	0.55	0.48	0.89

Metals and Inorganics

Sulphate	mg/L	2	< 2	< 2	< 2
Nitrite (as N)	as N mg/L	0.03	< 0.03	< 0.03	< 0.03
Nitrate (as N)	as N mg/L	0.06	< 0.06	0.08	< 0.06
Hardness	mg/L as CaCO3	0.05	12.0	22.4	5.6
Calcium (total)	mg/L	0.01	3.20	6.03	1.04
Magnesium (total)	mg/L	0.001	0.962	1.79	0.733
Sodium (total)	mg/L	0.01	7.84	12.3	0.51
Iron (total)	mg/L	0.007	1.50	1.30	1.06
Phosphorus (total)	mg/L	0.003	0.025	0.027	0.061



FINAL REPORT

CA15228-JUL24 R1

Client: Pindhin Ltd
Project: 304108.003 McGarry Landfill SW
Project Manager: Greg Way
Samplers: Abigail Redmond

MATRIX: WATER

Sample Number		6	7	8
Sample Name		SW1	SW2	Ditch
Sample Matrix		Surface Water	Surface Water	Surface Water
Sample Date		23/07/2024	23/07/2024	23/07/2024
Parameter	Units	RL	Result	Result
Other (ORP)	pH	No unit	0.05	5.92
	Chloride	mg/L	1	< 1
Phenols	4AAP-Phenolics	mg/L	0.001	0.003



FINAL REPORT

CA15228-JUL24 R

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-TENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Alkalinity	EWL0525-JUL24	mg/L as CaCO3	2	< 2	0	20	100	80	120	NA		

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-TENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ammonia+Ammonium (N)	SKA0229-JUL24	mg/L	0.04	<0.04	2	10	99	90	110	95	75	125



FINAL REPORT

CA15228-JUL24 R

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Spike Recovery (%)	Recovery Limits (%)
Chloride	DIO8065-JUL24	mg/L	1	<1	ND	20	98	80	80	120	106	75
Sulphate	DIO8065-JUL24	mg/L	2	<2	ND	20	105	80	80	120	105	75

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Spike Recovery (%)	Recovery Limits (%)
Nitrite (as N)	DIO0531-JUL24	mg/L	0.03	<0.03	ND	20	99	90	90	110	100	75
Nitrate (as N)	DIO0531-JUL24	mg/L	0.06	<0.06	ND	20	100	90	90	110	99	75
Nitrite (as N)	DIO0535-JUL24	mg/L	0.03	<0.03	ND	20	97	90	90	110	102	75
Nitrate (as N)	DIO0535-JUL24	mg/L	0.06	<0.06	ND	20	100	90	90	110	102	75



FINAL REPORT

CA15228-JUL24 F

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Biochemical Oxygen Demand (BOD5)	BOD0054-JUL24	mg/L	2	< 2	3	30	108	70	130	79	70	130
Biochemical Oxygen Demand (BOD5)	BOD0057-JUL24	mg/L	2	< 2	1	30	108	70	130	NV	70	130

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Chemical Oxygen Demand	EWL0547-JUL24	mg/L	8	<8	ND	20	116	80	120	85	75	125
Chemical Oxygen Demand	EWL0548-JUL24	mg/L	8	<8	0	20	96	80	120	77	75	125
Chemical Oxygen Demand	EWL0563-JUL24	mg/L	8	<8	9	20	102	80	120	88	75	125



FINAL REPORT

CA15228-JUL24

QC SUMMARY

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-ENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Conductivity	EWL0525-JUL24	uS/cm	2	< 2	0	20	99	90	110	NA	Low	High

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-ENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Calcium (total)	EMS0210-JUL24	mg/L	0.01	<0.01	2	20	98	90	110	98	70	130
Iron (total)	EMS0210-JUL24	mg/L	0.007	<0.007	3	20	98	90	110	125	70	130
Magnesium (total)	EMS0210-JUL24	mg/L	0.001	<0.001	4	20	102	90	110	102	70	130
Sodium (total)	EMS0210-JUL24	mg/L	0.01	<0.01	2	20	99	90	110	106	70	130
Phosphorus (total)	EMS0210-JUL24	mg/L	0.003	0.003	7	20	100	90	110	NV	70	130



FINAL REPORT

CA15228-JUL24 R

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-TENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
pH	EWL0525-JUL24	No unit	0.05	NA	0		100	Low High	NA	Low High

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-TENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
4AAP-Phenolics	SKA0223-JUL24	mg/L	0.001	<0.001	ND	10	100	80 120	102	75 125

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-TENVIEWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Dissolved Solids	EWL0537-JUL24	mg/L	30	<30	0	20	101	80 120	NA	Low High



FINAL REPORT

CA15228-JUL24 R

QC SUMMARY

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0572-JUL24	mg/L	2	< 2	0	10	99	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen (N)	SKA0231-JUL24	mg/L	0.05	<0.05	1	10	99	90	110	101	75	125



FINAL REPORT

CA15228-JUL24 R

QC SUMMARY

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Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

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This report supersedes all previous versions.

– End of Analytical Report –



FINAL REPORT

CA15232-JUL24 R1

304108.003 Mcgarry Landfill GW

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS

Client Pinchin Ltd
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Telephone 705-521-0560 cell: 705-618-0186
Facsimile
Email gway@Pinchin.com
Project 304108.003 Mogarry Landfill GW
Order Number
Samples Ground Water (8)

LABORATORY DETAILS

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SGS Reference CA15232-JUL24
Received 07/24/2024
Approved 08/08/2024
Report Number CA15232-JUL24 R1
Date Reported 08/08/2024

COMMENTS

Temperature of Sample upon Receipt: 8 degrees C

SIGNATORIES

Jill Campbell, B.Sc.,GISAS



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Samplers: Kate Binaldi

12

L2 = ODWS MAC / WATER / -- Table 1,2 and 3 - Drinking Water - Reg O,100_03

Biochemical Oxygen Demand (BOD5)

Metals and Inorganics

Sulphate	mg/L	2	500		10	8	3	110	5	< 2	4	< 2
Nitrate (as N)	as N mg/L	0.06	10		< 0.06	< 0.06	0.10	< 0.06	< 0.06	< 0.06	0.62	< 0.06
Barium (dissolved)	mg/L	0.00008	1		0.00266	0.00137	0.0106	0.0688	0.00087	0.00171	0.0150	0.00172
Boron (dissolved)	mg/L	0.002	5		0.007	0.003	0.015	3.11	0.004	0.005	< 0.002	0.006
Calcium (dissolved)	mg/L	0.01			2.73	4.32	2.19	171	5.68	7.76	1.17	7.68
Iron (dissolved)	mg/L	0.007	0.3		0.145	0.030	0.020	29.1	< 0.007	0.139	0.011	0.140
Magnesium (dissolved)	mg/L	0.001			0.699	0.755	0.483	25.7	1.52	1.19	0.397	1.20
Sodium (dissolved)	mg/L	0.01	200	20	1.33	2.44	1.11	16.2	1.46	0.65	1.12	0.63



Client: Pinchin Ltd

Project 304108.003 McGarry Landfill GW

Project Manager: Greg Way

Samplers: Kate Binaldi[illegible]

L1 = ODWS_AO_OG / WATER / -. Table 4 - Drinking Water - Reg O.189.03

L2 = ODWS_MAC / WATER / - - Table 1,2 and 3 - Drinking Water - Reg O.169_03

Parameter

Other (ORP)

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EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	ODWS_AO_OG / WATER / -- Table 4 - Drinking Water - Reg O.169_03	ODWS_MAC / WATER / -- Table 1,2 and 3 - Drinking Water - Reg O.169_03
				L1	L2

MW4

Total Dissolved Solids	SM 2540C	mg/L	646	500
Iron (dissolved)	SM 3030/EPA 200.8	mg/L	29.1	0.3
Dissolved Organic Carbon	SM 5310	mg/L	7	5



FINAL REPORT

CA15232-JUL24 f

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Alkalinity	EWL0525-JUL24	mg/L as CaCO3	2	< 2	0	20	100	80	120	NA	Low	High
Alkalinity	EWL0526-JUL24	mg/L as CaCO3	2	< 2	ND	20	102	80	120	NA	Low	High

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	High
Ammonia+Ammonium (N)	SKA0229-JUL24	mg/L	0.04	<0.04	2	10	99	90	110	95	75	125



FINAL REPORT

CA15232-JUL24 F

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEW1-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Chloride	DIO8065-JUL24	mg/L	1	<1	ND	20	98	80	106	75
Sulphate	DIO8065-JUL24	mg/L	2	<2	ND	20	105	80	105	75
Sulphate	DIO8072-JUL24	mg/L	2	<2	2	20	104	80	107	75

Anions by IC

Method: EPA300/MA300-Ions 1.3 | Internal ref.: ME-CA-IENVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Nitrate (as N)	DIO0531-JUL24	mg/L	0.06	<0.06	ND	20	100	90	99	75



FINAL REPORT

CA15232-JUL24 R

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Biochemical Oxygen Demand (BOD5)	BOD0054-JUL24	mg/L	2	< 2	3	30	108	70	130	79	70	130

Carbon by SFA

Method: SM 5310 | Internal ref.: ME-CA-IENVISFA-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
Dissolved Organic Carbon	SKA0222-JUL24	mg/L	1	<1	ND	20	96	90	110	93	75	125
Dissolved Organic Carbon	SKA0243-JUL24	mg/L	1	<1	1	20	96	90	110	99	75	125



FINAL REPORT

CA15232-JUL24 R

QC SUMMARY

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-TENVIEWWL-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Low	High
Chemical Oxygen Demand	EWL0547-JUL24	mg/L	8	<8	ND	20	116	80	80	120	85	75
Chemical Oxygen Demand	EWL0548-JUL24	mg/L	8	<8	0	20	96	80	80	120	77	75
Chemical Oxygen Demand	EWL0562-JUL24	mg/L	8	<8	ND	20	98	80	80	120	87	75
Chemical Oxygen Demand	EWL0563-JUL24	mg/L	8	<8	9	20	102	80	80	120	88	75

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-TENVIEWWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	High	Low	High
Conductivity	EWL0525-JUL24	uS/cm	2	< 2	0	20	99	90	90	110	NA	
Conductivity	EWL0526-JUL24	uS/cm	2	< 2	0	20	100	90	90	110	NA	
Conductivity	EWL0573-JUL24	uS/cm	2	< 2	0	20	100	90	90	110	NA	



FINAL REPORT

CA15232-JUL24 F

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Barium (dissolved)	EMS0213-JUL24	mg/L	0.00008	<0.00008	3	20	97	90	96	70
Boron (dissolved)	EMS0213-JUL24	mg/L	0.002	<0.002	5	20	99	90	99	70
Calcium (dissolved)	EMS0213-JUL24	mg/L	0.01	<0.01	1	20	98	90	100	70
Iron (dissolved)	EMS0213-JUL24	mg/L	0.007	<0.007	ND	20	98	90	125	70
Magnesium (dissolved)	EMS0213-JUL24	mg/L	0.001	<0.001	5	20	102	90	97	70
Sodium (dissolved)	EMS0213-JUL24	mg/L	0.01	<0.01	2	20	99	90	106	70

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
pH	EWL0525-JUL24	No unit	0.05	NA	0		100		NA	
pH	EWL0526-JUL24	No unit	0.05	NA	0		100		NA	



FINAL REPORT

CA15232-JUL24 I

QC SUMMARY

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-IENVIEWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	Low High
Total Dissolved Solids	EWL0537-JUL24	mg/L	30	<30	0	20	101	80	120	NA		

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	Low High
Total Suspended Solids	EWL0587-JUL24	mg/L	2	<2	2	10	97	90	110	NA		
Total Suspended Solids	EWL0598-JUL24	mg/L	2	<2	3	10	97	90	110	NA		
Total Suspended Solids	EWL0604-JUL24	mg/L	2	<2	2	10	95	90	110	NA		
Total Suspended Solids	EWL0625-JUL24	mg/L	2	<2	1	10	100	90	110	NA		
Total Suspended Solids	EWL0629-JUL24	mg/L	2	<2	1	10	101	90	110	NA		
Total Suspended Solids	EWL0634-JUL24	mg/L	2	<2	0	10	98	90	110	NA		

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

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Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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This report supersedes all previous versions.

-- End of Analytical Report --



FINAL REPORT

CA15144-OCT24 R1

304108.003 McGarry Landfill SW

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS

Client Pinchin Ltd
Address 662 Falconbridge Rd, Unit 3, Sudbury
Canada, P3A 4S4
Phone: 705-521-0560 cell: 705-618-0186.
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Project 304108.003 McGarry Landfill SW
Order Number
Samples Surface Water (2)

LABORATORY DETAILS

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SGS Reference CA15144-OCT24
Received 10/17/2024
Approved 10/22/2024
Report Number CA15144-OCT24 R1
Date Reported 10/22/2024

COMMENTS

Temperature of Sample upon Receipt: 9 degrees C

SIGNATORIES

Brad Moore Hon. B.Sc



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FINAL REPORT

CA15144-OCT24 R1

Client: Pindhin Ltd
Project: 304108.003 McGarry Landfill SW
Project Manager: Greg Way
Samplers: Olivia King/Katie Rhadli

MATRIX: WATER

L1 = PWQO_L / WATER / - Table 2 - General - July 1999 PBS 3303E

Sample Number	6	7
Sample Name	SW1	SW2
Sample Matrix	Surface Water	Surface Water
Sample Date	16/10/2024	16/10/2024

Parameter	Units	RL	L1	Result	Result
General Chemistry					
Biochemical Oxygen Demand (BOD5)	mg/L	2		< 4 †	< 4 †
Total Suspended Solids	mg/L	2		2	6
Alkalinity	mg/L as CaCO ₃	2		4	6
Conductivity	uS/cm	2		54	63
Total Dissolved Solids	mg/L	30		66	60
Chemical Oxygen Demand	mg/L	8		34	33
Ammonia+Ammonium (N)	as N mg/L	0.1		< 0.1	< 0.1
Total Kjeldahl Nitrogen (N)	as N mg/L	0.05		0.29	0.35

Metals and Inorganics

Sulphate	mg/L	2		< 2	< 2
Nitrite (as N)	as N mg/L	0.03		< 0.03	< 0.03
Nitrate (as N)	as N mg/L	0.06		< 0.06	< 0.06
Hardness	mg/L as CaCO ₃	0.05		9.8	11.9
Calcium (total)	mg/L	0.01		2.75	3.24
Magnesium (total)	mg/L	0.001		0.725	0.914
Sodium (total)	mg/L	0.01		9.30	9.25
Iron (total)	mg/L	0.007	0.3	0.443	0.559
Phosphorus (total)	mg/L	0.003	0.01	0.009	0.015



FINAL REPORT

CA15144-OCT24 R1

Client: Pinchin Ltd
Project: 304108.003 McGarry Landfill SW
Project Manager: Greg Way
Samplers: Olivia King/Katie Rineadli

MATRIX: WATER

L1 = PW000_L / WATER / ... Table 2 - General - July 1999 PBS 3303E

Sample Number	6	7
Sample Name	SW1	SW2
Sample Matrix	Surface Water	Surface Water
Sample Date	16/10/2024	16/10/2024

Parameter	Units	RL	L1	Result	Result
Other (ORP)					
pH	No unit	0.05	0.1 8.6	6.41	6.71
Chloride	mg/L	1		16	16
Phenols					
4AAP-Phenolics	mg/L	0.001	0.001	0.002	< 0.001

EXCEEDANCE SUMMARY

PWQO_L / WATER
/ -- Table 2 -
General - July 1999
PIBS 3303E
L1

Parameter	Method	Units	Result
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SW1

Iron	SM 3030/EPA 200.8	mg/L	0.448	0.3
pH	SM 4500	No unit	6.41	0.1
4AAP-Phenolics	SM 5530B-D	mg/L	0.002	0.001

SW2

Iron	SM 3030/EPA 200.8	mg/L	0.559	0.3
Phosphorus	SM 3030/EPA 200.8	mg/L	0.015	0.01



FINAL REPORT

CA15144-OCT24 F

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
								Low	High	Low	High
Alkalinity	EWL0434-OCT24	mg/L as CaCO3	2	< 2	0	20	98	80	120	NA	

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
								Low	High	Low	High
Ammonia+Ammonium (N)	SKA0176-OCT24	as N mg/L	0.1	<0.1	1	10	101	90	110	96	75 125



FINAL REPORT

CA15144-OCT24 F

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chloride	DIO8044-OCT24	mg/L	1	<1	ND	20	100	80	120	92	75	125
Sulphate	DIO8044-OCT24	mg/L	2	<2	ND	20	107	80	120	102	75	125

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nitrite (as N)	DIO0407-OCT24	mg/L	0.03	<0.03	8	20	99	90	110	99	75	125
Nitrate (as N)	DIO0407-OCT24	mg/L	0.06	<0.06	0	20	100	90	110	NV	75	125
Nitrite (as N)	DIO0426-OCT24	mg/L	0.03	<0.03	ND	20	99	90	110	98	75	125
Nitrate (as N)	DIO0426-OCT24	mg/L	0.06	<0.06	ND	20	100	90	110	101	75	125



FINAL REPORT

CA15144-OCT24 f

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWML-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0039-OCT24	mg/L	2	< 2	22	30	93	70	130	106	70	130

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-IENVIEWML-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chemical Oxygen Demand	EWL0418-OCT24	mg/L	8	< 8	0	20	94	80	120	95	75	125

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-IENVIEWML-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Conductivity	EWL0434-OCT24	uS/cm	2	< 2	0	20	100	90	110	NA		



FINAL REPORT

CA15144-OCT24 F

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Calcium (total)	EMS0209-OCT24	mg/L	0.01	<0.01	3	20	104	90	101	70
Iron (total)	EMS0209-OCT24	mg/L	0.007	<0.007	0	20	100	90	71	70
Magnesium (total)	EMS0209-OCT24	mg/L	0.001	<0.001	ND	20	98	90	91	70
Sodium (total)	EMS0209-OCT24	mg/L	0.01	<0.01	1	20	99	90	98	70
Phosphorus (total)	EMS0209-OCT24	mg/L	0.003	<0.003	0	20	95	90	NV	70

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
pH	EWL0434-OCT24	No unit	0.05	NA	0		100		NA	



FINAL REPORT

CA15144-OCT24 F

QC SUMMARY

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-IEN/ISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
4AAP-Phenolics	SKA0174-OCT24	mg/L	0.001	<0.001	ND	10	101	80	94	75
								Low	High	High

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-IEN/VIEWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Dissolved Solids	EWL0401-OCT24	mg/L	30	<30	0	20	98	80	NA	NA
								Low	High	High

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IEN/VIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Suspended Solids	EWL0452-OCT24	mg/L	2	<2	2	10	96	90	NA	NA
								Low	High	High



FINAL REPORT

CA15144-OCT24 F

QC SUMMARY

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENV/ISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank				Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High	Low	High
Total Kjeldahl Nitrogen (N)	SKA0177-OCT24	mg/L	0.05	<0.05	ND	10	100	90	110	95	75	125

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

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This report supersedes all previous versions.

-- End of Analytical Report --



FINAL REPORT

CA15159-OCT24 R1

304108.003-McGarry Landfill GW

Prepared for

Pinchin Ltd

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Pinchin Ltd	Project Specialist	Jill Campbell, B.Sc.,GISAS
Address	662 Falconbridge Rd, Unit 3, Sudbury Canada, P3A 4S4 Phone: 705-521-0560 cell: 705-618-0186	Laboratory	SGS Canada Inc.
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Email	gway@Pinchin.com	Email	jill.campbell@sgs.com
Project	304108.003-McGarry Landfill GW	SGS Reference	CA15159-OCT24
Order Number		Received	10/17/2024
Samples	Ground Water (8)	Approved	10/30/2024
		Report Number	CA15159-OCT24 R1
		Date Reported	10/30/2024

COMMENTS

Temperature of Sample upon Receipt: 11 degrees C

SIGNATORIES

Jill Campbell, B.Sc.,GISAS



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FINAL REPORT

CA15159-OCT24 R1

Client: Pinchin Ltd
Project: 304108.003-McGarry Landfill GW
Project Manager: Greg Way
Samplers: Olivia King/Katie Rinaldi

MATRIX: WATER

L1 = ODWS_AQ_OG / WATER / - - Table 4 - Drinking Water - Reg O.169_03

L2 = ODWS_MAC / WATER / - - Table 1,2 and 3 - Drinking Water - Reg O.169_03

Parameter

Units	RL	L1	L2	Sample Number	7	8	9	10	11	12	13	14
Sample Name	Sample Matrix	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Biochemical Oxygen Demand (BOD5)	mg/L	2			< 4†	< 4†	< 4†	< 12†	4	< 4†	< 4†	< 4†
Total Suspended Solids	mg/L	2			26000	10300	439	41	73	6	204	393
Alkalinity	mg/L as CaCO3	2	500	10	28	532	9	532	31	31	2	9
Conductivity	uS/cm	2		26	69	1040	25	1040	73	61	34	24
Total Dissolved Solids	mg/L	30	500	77	54	640	< 30	640	51	49	34	37
Chemical Oxygen Demand	mg/L	8		< 8	< 8	24	< 8	24	< 8	< 8	< 8	< 8
Ammonia+Ammonium (N)	as N mg/L	0.1		< 0.1	< 0.1	1.2	< 0.1	1.2	< 0.1	< 0.1	< 0.1	< 0.1
Dissolved Organic Carbon	mg/L	1	5	< 1	< 1	6	< 1	6	< 1	< 1	2	< 1

Metals and Inorganics

Sulphate	mg/L	2	500	7	2	2	2	60	9	< 2	< 2	26
Nitrate (as N)	as N mg/L	0.06		< 0.06	< 0.06	< 0.06	0.12	< 0.06	< 0.06	< 0.06	2.81	0.12
Barium (dissolved)	mg/L	0.00008	10	0.00114	0.00192	0.00192	0.0106	0.0850	0.00066	0.00271	0.0257	0.0111
Boron (dissolved)	mg/L	0.002	5	0.003	< 0.002	< 0.002	0.003	2.59	0.004	0.009	< 0.002	0.003
Calcium (dissolved)	mg/L	0.01		2.94	6.06	6.06	2.07	177	7.63	9.22	2.09	2.07
Iron (dissolved)	mg/L	0.007		0.067	0.008	0.008	< 0.007	31.9	< 0.007	0.338	0.010	< 0.007
Magnesium (dissolved)	mg/L	0.001		0.648	1.52	1.52	0.411	23.4	1.78	1.37	0.728	0.408
Sodium (dissolved)	mg/L	0.01	200	1.30	3.93	3.93	1.12	10.6	1.43	0.97	1.34	1.11



FINAL REPORT

CA15159-OCT24 R1

Client: Pinchin Ltd
Project: 304108.003-McGarry Landfill GW
Project Manager: Greg Way
Samplers: Olivia King/Katie Rinaldi

MATRIX: WATER

L1 = ODWS_AO_OG / WATER / -- Table 4 - Drinking Water - Reg O.169_03
L2 = ODWS_MAC / WATER / -- Table 1,2 and 3 - Drinking Water - Reg O.169_03

Parameter	Units	RL	L1	L2	Sample Number	7	8	9	10	11	12	13	14
					Sample Name	MW1	MW2	MW3	MW4	MW5	MW7	MW8	GW DUP
					Sample Matrix	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
					Sample Date	16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024	16/10/2024
						Result	Result	Result	Result	Result	Result	Result	Result
pH	No unit	0.05	8.5			6.94	7.11	6.61	7.74	7.40	7.24	6.03	6.75
Chloride	mg/L	1	250			1	4	<1	2	<1	<1	<1	<1

Other (ORP)

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	ODWS_AO_OG / WATER / - - Table 4 - Drinking Water - Reg O.169_03	ODWS_MAC / WATER / - - Table 1,2 and 3 - Drinking Water - Reg O.169_03
				L1	L2

MW4

Alkalinity	SM 2320	mg/L as CaCO3	532	500
Total Dissolved Solids	SM 2540C	mg/L	640	500
Iron (dissolved)	SM 3030/EPA 200.8	mg/L	31.9	0.3
Dissolved Organic Carbon	SM 5310	mg/L	6	5

MW7

Iron (dissolved)	SM 3030/EPA 200.8	mg/L	0.336	0.3
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FINAL REPORT

CA15159-OCT24 F

QC SUMMARY

Alkalinity

Method: SM 2320 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Alkalinity	EWL0414-OCT24	mg/L as CaCO3	2	< 2	0	20	104	80	120	NA		

Ammonia by SFA

Method: SM 4500 | Internal ref.: ME-CA-IENVISFA-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Ammonia+Ammonium (N)	SKA0176-OCT24	as N mg/L	0.1	<0.1	1	10	101	90	110	96	75	125



FINAL REPORT

CA15159-OCT24 F

QC SUMMARY

Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-IENVIEVL-LAK-AN-026

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)	High
Chloride	DIO8047-OCT24	mg/L	1	<1	ND	20	98	80	97	75	125
Sulphate	DIO8047-OCT24	mg/L	2	<2	ND	20	101	80	100	75	125

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-IENVVIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)	High
Nitrate (as N)	DIO0406-OCT24	mg/L	0.06	<0.06	ND	20	99	90	101	75	125
Nitrate (as N)	DIO0407-OCT24	mg/L	0.06	<0.06	0	20	100	90	NV	75	125



FINAL REPORT

CA15159-OCT24 R

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	Spike Recovery (%)	Low	High
Biochemical Oxygen Demand (BOD5)	BOD0039-OCT24	mg/L	2	< 2	22	30	93	70	130	106	70	130

Carbon by SFA

Method: SM 5310 | Internal ref.: ME-CA-IENVISFA-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	Spike Recovery (%)	Low	High
Dissolved Organic Carbon	SKA0170-OCT24	mg/L	1	<1	ND	20	99	90	110	92	75	125

Chemical Oxygen Demand

Method: HACH 8000 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-009

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Low	Spike Recovery (%)	Low	High
Chemical Oxygen Demand	EWL0417-OCT24	mg/L	8	<8	4	20	90	80	120	90	75	125
Chemical Oxygen Demand	EWL0418-OCT24	mg/L	8	<8	0	20	94	80	120	95	75	125



FINAL REPORT

CA15159-OCT24 F

QC SUMMARY

Conductivity

Method: SM 2510 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)	High
Conductivity	EWL0414-OCT24	uS/cm	2	< 2	0	20	98	90	110	NA	

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVSPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)	High
Barium (dissolved)	EMS0199-OCT24	mg/L	0.00008	<0.00008	1	20	100	90	110	87	70
Boron (dissolved)	EMS0199-OCT24	mg/L	0.002	<0.002	3	20	91	90	110	89	70
Calcium (dissolved)	EMS0199-OCT24	mg/L	0.01	<0.01	10	20	102	90	110	93	70
Iron (dissolved)	EMS0199-OCT24	mg/L	0.007	<0.007	ND	20	102	90	110	100	70
Magnesium (dissolved)	EMS0199-OCT24	mg/L	0.001	<0.001	0	20	103	90	110	89	70
Sodium (dissolved)	EMS0199-OCT24	mg/L	0.01	0.01	3	20	106	90	110	99	70
Boron (dissolved)	EMS0225-OCT24	mg/L	0.002	<0.002	4	20	102	90	110	98	70

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
pH	EWL0414-OCT24	No unit	0.05	NA	0		100	Low High	NA	Low High

Solids Analysis

Method: SM 2540C | Internal ref.: ME-CA-IENVIEWWL-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Dissolved Solids	EWL0402-OCT24	mg/L	30	<30	0	20	101	80 120	NA	Low High

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank		Matrix Spike / Ref.	
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)	Spike Recovery (%)	Recovery Limits (%)
Total Suspended Solids	EWL0425-OCT24	mg/L	2	<2	7	10	103	90 110	NA	Low High



FINAL REPORT

CA15159-OCT24 F

QC SUMMARY

- Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.
- Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.
- LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.
- Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.
- Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.
- RL: Reporting limit
- RPD: Relative percent difference
- AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.

RL Reporting Limit.

↑ Reporting limit raised.

↓ Reporting limit lowered.

NA The sample was not analysed for this analyte

ND Non Detect

Results relate only to the sample tested.

Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.

"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm.

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This report supersedes all previous versions.

– End of Analytical Report –

APPENDIX VII
Monitoring and Screening Checklist

Appendix D-Monitoring and Screening Checklist

General Information and Instructions

General Information: The checklist is to be completed, and submitted with the Monitoring Report.

Instructions: A complete checklist consists of:

- (a) a completed and signed checklist, including any additional pages of information which can be attached as needed to provide further details where indicated.
- (b) completed contact information for the Competent Environmental Practitioner (CEP)
- (c) self-declaration that CEP(s) meet(s) the qualifications as set out below and in Section 1.2 of the Technical Guidance Document.

Definition of Groundwater CEP:

For groundwater, the CEP must have expertise in hydrogeology and meet one of the following:

- (a) the person holds a licence, limited licence or temporary licence under the *Professional Engineers Act*; or
- (b) the person holds a certificate of registration under the *Professional Geoscientists Act, 2000* and is a practicing member, temporary, member or limited member of the Association of Professional Geoscientists of Ontario. O. Reg. 66/08, s. 2..

Definition of Surface water CEP:

A CEP for surface water assessments is a scientist, professional engineer or professional geoscientist as described in (a) and (b) above with demonstrated experience and post-secondary education, either a diploma or degree, in hydrology, aquatic ecology, limnology, aquatic biology, physical geography with specialization in surface water, and/or water resource management.

The type of scientific work that a CEP performs must be consistent with that person's education and experience. If an individual has appropriate training and credentials in both groundwater and surface water and is responsible for both areas of expertise, the CEP may then complete and validate both sections of the checklist.

Monitoring Report and Site Information

Waste Disposal Site Name	McGarry Waste Disposal Site
Location (e.g. street address, lot, concession)	The Site is located approximately 4 kilometres (km) east of Virginiatown, Ontario, along the border between Québec and Ontario. The Site is accessed via a gravel road that extends off Raven Mountain Road, south of Highway 66.
GPS Location (taken within the property boundary at front gate/ front entry)	Universal Transverse Mercator (UTM) coordinates Zone 17U, 609,800 metres (m) Easting and 5, 332,529 m Northing (North American Datum (NAD) 1983)
Municipality	Township of McGarry
Client and/or Site Owner	Corporation of the Township of McGarry
Monitoring Period (Year)	2024
This Monitoring Report is being submitted under the following:	
Certificate of Approval No.:	A572402
Director's Order No.:	
Provincial Officer's Order No.:	
Other:	

Report Submission Frequency	☒ Annual ☐ Other	Specify:
The site is:	☒ Active ☐ Inactive ☐ Closed	
If closed, specify C of A, control or authorizing document closure date:		
Has the nature of the operations at the site changed during this monitoring period?	☐ Yes ☒ No	
If yes, provide details:		
Have any measurements been taken since the last reporting period that indicate landfill gas volumes have exceeded the MOE limits for subsurface or adjacent buildings? (i. e. exceeded the LEL for methane)	☐ Yes ☒ No	

Groundwater WDS Verification:

Based on all available information about the site and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The monitoring program continues to effectively characterize site conditions and any groundwater discharges from the site. All monitoring wells are confirmed to be in good condition and are secure:	☐ Yes ☒ No	MW3 - Casing has sunk and casing lid is missing. MW4 - Riser too tall to close casing lid and well cap is missing. MW8 - Surficial concrete seal at base of well appears to be compromised.
2) All groundwater, leachate and WDS gas sampling and monitoring for the monitoring period being reported on was successfully completed as required by Certificate(s) of Approval or other relevant authorizing/control document(s):	☐ Yes ☒ No ☐ Not Applicable	If no, list exceptions below or attach information.

Groundwater Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date
MW6	MW6 has not been located since fall 2015 and is presumed to have been destroyed.	All events

3) a) Some or all groundwater, leachate and WDS gas sampling and monitoring requirements have been established or defined outside of a ministry C of A, authorizing, or control document.		☒ Yes ☐ No ☐ Not Applicable
b) If yes, the sampling and monitoring identified under 3(a) for the monitoring period being reported on was successfully completed in accordance with established protocols, frequencies, locations, and parameters developed as per the Technical Guidance Document:		☒ Yes ☐ No ☐ Not Applicable
Groundwater Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	If no, list exceptions below or attach additional information.
4) All field work for groundwater investigations was done in accordance with standard operating procedures as established/outlined per the Technical Guidance Document (including internal/external QA/QC requirements) (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	☐ Yes ☒ No	Spring and fall groundwater samples were above the recommended temperature of less than 10 degrees Celsius (10 degrees Celsius and 11 degrees Celsius, respectively).

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The site has an adequate buffer, Contaminant Attenuation Zone (CAZ) and/or contingency plan in place. Design and operational measures, including the size and configuration of any CAZ, are adequate to prevent potential human health impacts and impairment of the environment.	☒ Yes ☐ No	A CAZ has not been developed for the Site. However, Pinchin notes that based on the current observed water quality data, landfill-derived leachate impacts appear to attenuate prior to the property boundary.	
6) The site meets compliance and assessment criteria.	☒ Yes ☐ No	If no, list and explain exceptions:	
7) The site continues to perform as anticipated. There have been no unusual trends/ changes in measured leachate and groundwater levels or concentrations.	☒ Yes ☐ No	If no, list exceptions and explain reason for increase/change:	
1) Is one or more of the following risk reduction practices in place at the site: (a) There is minimal reliance on natural attenuation of leachate due to the presence of an effective waste liner and active leachate collection/treatment; or (b) There is a predictive monitoring program in-place (modeled indicator concentrations projected over time for key locations); or (c) The site meets the following two conditions (typically achieved after 15 years or longer of site operation): I. The site has developed stable leachate mound(s) and stable leachate plume geometry/concentrations; and II. Seasonal and annual water levels and water quality fluctuations are well understood.	☒ Yes ☐ No	Note which practice(s):	☐ (a) ☐ (b) ☒ (c)
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	☐ Yes ☒ No ☐ Not Applicable	If yes, list value(s) that are/have been exceeded and follow-up action taken:	

Groundwater CEP Declaration:

I am a licensed professional Engineer or a registered professional geoscientist in Ontario with expertise in hydrogeology, as defined in Appendix D under Instructions. Where additional expertise was needed to evaluate the site monitoring data, I have relied on individuals who I believe to be experts in the relevant discipline, who have co-signed the compliance monitoring report or monitoring program status report, and who have provided evidence to me of their credentials.

I have examined the applicable Certificate of Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended), and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories*, or as amended from time to time by the ministry.

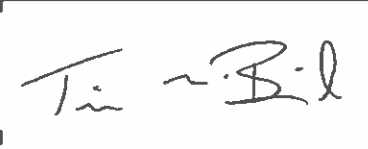
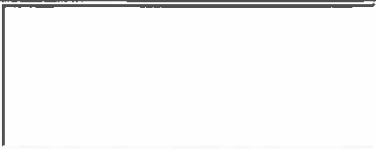
If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature and will be rectified for the next monitoring/reporting period. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

31-Jan-2025

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

☐ No changes to the monitoring program are recommended ☒ The following change(s) to the monitoring program is/are recommended:	Remove VOC analysis for all wells with the exception of the source well (MW4) and MW8. Should VOCs be detected at MW4 in the future, the analysis of these parameters can be re-introduced into the program. Conduct minor well repairs to maintain the integrity of the monitoring well network. Remove MW6 from the monitoring program, as it has not been located since the fall of 2015 and is presumed destroyed.
☒ No Changes to site design and operation are recommended ☐ The following change(s) to the site design and operation is/are recommended:	

Name:	Tim McBride		
Seal:	Add Image		
Signature:		Date:	31-Jan-2025
CEP Contact Information:	Tim McBride		
Company:	Pinchin Ltd.		
Address:	662 Falconbridge Road, Unit 3 Sudbury, Ontario P3A 4S4		
Telephone No.:	705.521.0560	Fax No. :	
E-mail Address:	tmcbride@pinchin.com		
Co-signers for additional expertise provided:			
Signature:		Date:	Select Date
Signature:		Date:	Select Date

Surface Water WDS Verification:

Provide the name of surface water body/bodies potentially receiving the WDS effluent and the approximate distance to the waterbody (including the nearest surface water body/bodies to the site):

Name (s)	Unnamed ditch. Unnamed pond. Milky Creek.
Distance(s)	West portion of the Site. Central portion of the landfill. Approximately 500 m west of the Site.

Based on all available information and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The current surface water monitoring program continues to effectively characterize the surface water conditions, and includes data that relates upstream/background and downstream receiving water conditions:	☒ Yes ☐ No	If no, identify issues:
2) All surface water sampling for the monitoring period being reported was successfully completed in accordance with the Certificate(s) of Approval or relevant authorizing/control document(s) (if applicable):	☐ Yes ☐ No ☒ Not applicable (No C of A, authorizing / control document applies)	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date

3) a) Some or all surface water sampling and monitoring program requirements for the monitoring period have been established outside of a ministry C of A or authorizing/control document.		☒ Yes ☐ No ☐ Not Applicable
b) If yes, all surface water sampling and monitoring identified under 3 (a) was successfully completed in accordance with the established program from the site, including sampling protocols, frequencies, locations and parameters) as developed per the Technical Guidance Document:		☐ Yes ☒ No ☐ Not Applicable
		If no, specify below or provide details in an attachment.
Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date
Ditch	Dry	Fall
Pond	Dry	All events
4) All field work for surface water investigations was done in accordance with standard operating procedures, including internal/external QA/QC requirements, as established/ outlined as per the Technical Guidance Document, MOE 2010, or as amended. (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	☐ Yes ☒ No	Spring surface water samples exceeded the recommended temperature of below 10 degrees Celsius (10 degrees Celsius).

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The receiving water body meets surface water-related compliance criteria and assessment criteria: i.e., there are no exceedances of criteria, based on MOE legislation, regulations, Water Management Policies, Guidelines and Provincial Water Quality Objectives and other assessment criteria (e.g., CWQGs, APVs), as noted in Table A or Table B in the Technical Guidance Document (Section 4.6):	☐ Yes ☒ No	
If no, list parameters that exceed criteria outlined above and the amount/percentage of the exceedance as per the table below or provide details in an attachment:		
Parameter	Compliance or Assessment Criteria or Background	Amount by which Compliance or Assessment Criteria or Background Exceeded
e.g. Nickel	e.g. C of A limit, PWQO, background	e.g. X% above PWQO
pH	PWQO, APV, CWQG	Ditch (spring / summer): 6.27 / 5.92 vs. PWQO/APV/ CWQG lower limits of 6.5 and 6.0. SW1 (spring / fall): 6.26 / 6.41 vs. PWQO/APV lower limit of 6.5
Total phosphorous Iron	PWQO PWQO, APV	Ditch (summer): 0.061 mg/L vs. PWQO of 0.03 mg/L Ditch (summer) : 1.06 mg/L vs. PWQO/APV of 0.3 and 1 mg/L SW1: (all events): 0.322 / 1.50 / 0.448 mg/L vs. PWQO/APV of 0.03 / 1 mg/L. SW2 (all events): 0.357 / 1.3 / 0.559 mg/L vs. PWQO/APV of 0.03 / 1 mg/L
Phenols	PWQO	Ditch (all events): 0.003, 0.004, 0.003 mg/L vs. PWQO of 0.001 mg/L. SW1 (all events): 0.002 mg/L vs. PWQO of 0.001 mg/L. SW2 (spring and summer): 0.003 mg/L vs. PWQO of 0.001 mg/L.
Cadmium	CWQG	Ditch (spring): 0.000124 mg/L vs. CWQG of 0.000017 mg/L. SW1 (spring): 0.000031 mg/L vs. CWQG of 0.000017 mg/L. SW2 (spring): 0.000024 mg/L vs. CWQG of 0.000017 mg/L.
6) In my opinion, any exceedances listed in Question 5 are the result of non-WDS related influences (such as background, road salting, sampling site conditions)?	☒ Yes ☐ No	If yes, specify: Elevated concentrations of total phosphorous, iron, phenols and cadmium, as well as depressed pH, are consistent with background conditions at SW1.

7) All monitoring program surface water parameter concentrations fall within a stable or decreasing trend. The site is not characterized by historical ranges of concentrations above assessment and compliance criteria.	☐ Yes ☒ No	If no, list parameters and stations that is outside the expected range. Identify whether parameter concentrations show an increasing trend or are within a high historical range: The Site is characterized by low pH and historical ranges of iron, cadmium, phosphorous and phenol concentrations above assessment and compliance criteria. All surface water parameters fall within a stable trend and are considered to be a result of naturally occurring/background environmental conditions.
8) For the monitoring program parameters, does the water quality in the groundwater zones adjacent to surface water receivers exceed assessment or compliance criteria (e.g. , PWQOs, CWQGs, or toxicity values for aquatic biota (APVs)):	☐ Yes ☐ No ☐ Not Known ☒ Not Applicable	If yes, provide details and whether remedial measures are necessary:
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	☐ Yes ☐ No ☒ Not Applicable	If yes, list value(s) that are/have been exceeded and follow-up action taken:

Surface Water CEP Declaration:

I, the undersigned hereby declare that I am a Competent Environmental Practitioner as defined in Appendix D under Instructions, holding the necessary level of experience and education to design surface water monitoring and sampling programs, conduct appropriate surface water investigations and interpret the related data as it pertains to the site for this monitoring period.

I have examined the applicable Certificate of Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended) and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories, or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature or will be rectified for future monitoring events. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

31-Jan-2025

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

☒ No Changes to the monitoring program are recommended ☐ The following change(s) to the monitoring program is/are recommended:	
☒ No changes to the site design and operation are recommended ☐ The following change(s) to the site design and operation is/are recommended:	

CEP Signature	Tim McBride	
Relevant Discipline	Hydrogeologist	
Date:	31-Jan-2025	
CEP Contact Information:	Tim McBride	
Company:	Pinchin Ltd.	
Address:	662 Falconbridge Road, Unit 3 Sudbury, Ontario P3A 4S4	
Telephone No.:	705.521.0560	
Fax No. :		
E-mail Address:	tmcbride@pinchin.com	
Save As		Print Form