COCHRANE

WATER / WASTE WATER SERVICES



WASTEWATER TREATMENT PLANT

2023 ANNUAL REPORT

Reference Index

2023 Annual Report

- A- Annual Performance Report
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ANNUAL

PERFORMANCE

REPORT

Annual Performance Report

This report is prepared to comply with Amended Environmental Compliance Approval Number 2737-BD4JYH issued June 28, 2019. The report shall contain:

(a) A summary and interpretation of all Influent monitoring data, including sewage characteristics, flow rates and a comparison to the values used in the design of the Works;

FLO	OWS
Total Flow	591,313 cubic meters
Average Daily Flow	1,497 cubic meters
Peak Hydraulic Flow	3,084 cubic meters

RAW SEWAGE RESULTS

RAW SEWAGE	MONTHLY AVERAGE RESULTS
BOD(5)	215.79 mg/l
TOTAL SUSPENDED SOLIDS	228.42 mg/l
TOTAL PHOSPHORUS	6.09 mg/l
TKN (as N)	108.78 mg/l
AMMONIA & AMMONIA NITROGEN	37.42 mg/l
pH	7.33 mg/L

(b) A summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

FINAL EFFLUENT	ANNUAL AVERAGE RESULTS
BOD(5)	12.17 mg/l
TOTAL SUSPENDED SOLIDS	12.03 mg/l
TOTAL PHOSPHORUS	0.31 mg/l
TKN (as N)	14.59 mg/l
AMMONIA	0.53 mg/l
CHLORINE RESIDUAL	0.0 mg/l
NITRITE	0.05 mg/l
NITRATE	19.15 mg/l
CBOD(5)	12.23 mg/l
E.COLI	970.24 CFU/100ml
WAS pH MAINTAINED BETWEEN 6.0-9.5 @ ALL TIMES?	Yes

FINAL EFFLUENT RESULTS

The total flow in 2023 was 591,313 cubic meters which represents a 15 % decrease from 2022. The total flow in 2023 was 29.6 % of the average day flow design capacity.

BOD(5)	92.18%
TOTAL SUSPENDED SOLIDS	93.43%
TOTAL PHOSPHORUS	92.55%
TKN (as N)	70.81%
AMMONIA	95.39%
AVERAGE REMOVAL EFFICIENCY	89.5%

The following represents removal efficiencies for the year 2023.

The above represents a increase in overall operating efficiency of 0.4 % over the year 2023.

(c) A summary of any deviations from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

None

(d) A summary of all operating issues encountered and corrective actions taken;

None

- (e) A summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;
 - 1. Drained and cleaned Contact Chamber
 - 2. Cleaned out Grit Chamber
 - 3. Changed hose on Ferric Pump
 - 4. Replaced bulbs on ultraviolent system
 - 5. Replaced filters on Blower

Other maintenance involved routine oiling, greasing, cleaning, servicing etc.

(f) A summary of any effluent quality assurance or control measures undertaken;

The monitoring program consists of regular daily rounds ensuring all equipment is functioning and that daily temperature, pH levels, chlorine residuals, dissolved oxygen, Phosphorus and Ammonia tests are recorded, and controlled. Sludge Blanket levels are also monitored and controlled on a daily basis along with scum removal. Monthly samples are taken for BOD, Suspended Solids, TKN, Nitrite, Nitrate, Weekly Samples were taken for E.Coli and Quarterly Samples were taken for Acute Lethality.

(g) A summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in the Approval or recommended by the manufacturer;

Attached to this report is the 2022 calibration records for the instrumentation at the Waste Water Treatment Plant. In 2023 the instruments will once again be checked for their accuracy.

(h) A summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any required under the following situations: (i) when any of the design objectives is not achieved more than 50% of the time in a year or there is an increasing trend in deterioration of Final Effluent quality and (ii) when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;

The attached Data Summary shows the Cochrane Waste Water Treatment Plant has not exceeded the effluent concentrations for the Biochemical Oxygen Demand (20 mg/l), Total Suspended Solids (20 mg/L) and Phosphorus Criteria (1.0 mg/l), as specified in Schedule C of the aforementioned certificate of approval. The pH level has been maintained.

Compliance - (Certificate of Approval) The peak hydraulic flow capacity of 11,500 cu. Meters / day was not exceeded during the year 2023.

 A tabulation of the volume of sludge generated in the reporting period, an outlined of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

It is anticipated that sludge volume haulage for the year 2023 should be equal to or less than that of 2022 as the Plant is operating at or close to its maximum efficiency.

SLUDGE VOLUME HAULED

YEAR	SLUDGE AMOUNT HAULED
2019	3504 M3
2020	3161 M3
2021	4325 M3
2022	1372 M3
2023	2214 M3

The Town has retained E360 of Timmins Ontario (C of A A-920134, R-004-1111521405) to haul and handle the sludge form the Water pollution Control Plant. The Town of Cochrane has also retained C& H Hauling of Matheson Ontario (C of A 9477-5MGIMT, ECA # H11000003605) to haul and handle the sludge from the Water Pollution Control Plant. C&H Pumping advises that the sludge is dumped at the Landfill Sites (Lot 2, Con2 Fournier Township and Lot 2, Con 4 Carr Township) and not used for any other purpose.

(j) A summary of any complaints received and any steps taken to address the complaints;

None

(k) A summary of all Bypass, spill, Overflows within the meaning of Part X of EPA and abnormal discharge events and other abnormal operating conditions;

The bypass alarm signaled 8 overflows for the year 2023.

DATE	ТҮРЕ	DURATION (hours)	FLOW (m3)
2023-04-10	Overflow	220.5	1933
2023-04-30	Overflow	55.5	7470
2023-06-30	Overflow	15	563.9
2023-08-02	Overflow	28	312.8
2023-08-11	Overflow	12	9347
2023-09-07	Overflow	8	569.9
2023-09-13	Overflow	4	500

The Overflow events were triggered by spring runoff and heavy rains. All

bypass /overflow events have been tested for all specified parameters, as per attached Bypass Summary.

The log date, time and duration of any bypasses (overflow) or upset condition will be recorded and sampled for BOD, suspended Solids and Total Phosphorus. Further, the Spills Action Centre (SAC) will be notified, with the completed form sent to the MOE District Office, which is a requirement.

(1) A copy of all Notice of Modifications to Sewage Works submitted to the Water Supervisor under paragraph 1.d. of Condition 10, with a summary report on status of implementation of all modifications;

None

(m) A summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overflow Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflow with estimated budget forecast for the year following that for which the report is submitted.

None

This is the report on the Cochrane Waste Water Treatment Plant for the year 2023. I certify that the information in this document and all the attachments are correct, accurate and complete to the best of my knowledge.

Prepared by, Melissa Hoogenhoud Environmental Services and Compliance Supervisor

ANNUAL SUMMARY

						Municipality	:	Cochrane	e (PUC)								
						Project Nam	ne:	Cochrane	e Water Po	ollution Cor	ntrol Plan	t					
						Project Num		12000035	5								
						Project Loca	ation:	Cochrane	e, ON								
<u>Month</u>	Parameter	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	September	<u>October</u>	<u>November</u>	December	<u>TOTAL</u>	AVERAGE	MAXIMUM	<u>MINIMU</u>
	Total Flow	41033.64	30641.35	38629.28	95073.85	60515.09	34376.13	33882.12	49383.29	49071.81	65465.78	48356.1	44884.61	591313.05		95073.85	
Influent	Peak Rate	2492	2231	1832	6087	5293	1935	1560.34	2935	3658	4148	2698.11	2138.24	37007.69	3083.97	6087	1560
Bypass	Plant-Vol.				1933.08	7470			9659.76	1069.9				20696.67	4139.33	9659.76	
	Time - Hrs				220.5	55.5	15		40	12				343	68.60	220.5	
Raw	Susp. solids	175	397	293	380	41	233	350	254	118	178	118	204	2741	228.42	397	
	BOD	270	300	308	306	65.5	150	170	220	230	190	110	270	2589.5	215.79	308	
	TKN	175	178	92	82.2	44.1	17.7	70.8	206	189	97.9	70.5	82.1	1305.3	108.78	206	
	Phosphorus	12	9.36	7.82	8.89	2.34	0.558	6.77	5.43	3.55	8.33	2.33	5.76	73.138	6.09	12	
	Ammonia	43.8	58.4	52.6	50	16.9	0.92	43.3	37	58.9	37.9	16.3	33	449.02	37.42	58.9	0
	Nitrate	0.1	0.05	0.05	0.05	0.1	37.3	0.1	0.05	0.1	0.05	0.05	0.25	38.25	3.19	37.3	
	Nitrite	0.1	0.05	0.05	0.05	0.1	0.05	0.1	0.05	0.1	0.05	0.24	0.25	1.19	0.10	0.25	
	Phosphate	8.19	20.3	15.9	18.3	2.18	0.142	15.1	8.3	4.9	14.1	2.31	9.13	118.852	9.90	20.3	
	pH	7.8	7.8	7.93	7.35	7.33	7.21	7.47	7.11	7.09	7.19	6.97	6.76	88.01	7.33	7.93	
	CBOD	220	300	130	220	58	110	140	200	180	91	140	220	2009	167.42	300	
Effluent	Susp. solids	5.3	10	21	9.6	11	35.7	4.7	1.3	2	34	1.7	8	144.3	12.03	35.7	
Linucin	BOD	2.7	4.2	3.9	5.5	4.7	110	2.1	2.1	3.8	1	2.3	3.7	146	12.00	110	
	Phosphorus	0.902632	0.1493158	0.13815	0.2449444			0.4275789	0.44025	0.3665294	0.3281579	0.2098325			0.31	0.902632	
	Ammonia	0.8938462	0.5753846	0.396	1.3283333	0.2589474				0.5490909	0.2084211			6.3291478	0.53		
	Nitrate	1.43	31.9	27.3	3.5	11.3	37.4	0.05	19.1	21.6	31.9	19.9	24.4	229.78	19.15	37.4	0.
	Nitrite	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.01	0.61	0.05	0.1	
	TKN	16.1	19.4	14.4	33.9	11.4	19.6	11.5	17.5	15.2	1.6	4.5	10	175.1	14.59	33.9	
	CBOD	2.2	2.8	2.6	3.5	1.5	120	1.8	1.8	4.1	1	2.2	3.2	146.7	12.23	11.9	
	Phosphate	0.18	0.164	0.275	0.303	0.072	0.155	11.9	0.379	0.194	0.121	0.057	0.138	13.938	0.19	4380	
	E.Coli	9.8	26.75	71.75	1125.75	1197.8	2836	4380	391.8	30	232.75	370.2	400.05	10672.6	970.24	4380	
Data	Acute Lethality		0			0				0		0	163.25	163.25	32.65	163.25	
Date	Air Used	+															
	Influent Temp	12 526316	12.336842	13.16	10 30////	12.619048	15 922727	17 521053	16 8/12857	16.207143	14.995	13 464706	13.414286	169 40442	1/ 10	17.521053	10 30//
	Influent pH		8.1457895	7.7515		7.5947619				7.442857	7.641		7.6864286			8.1457895	
	Aeration Temp.	9.7105263	10.175			13.572222			18.25	17.15	14.738889			163.46703		19.229412	
	30 Min. S.S.	73.611111	86.375	63.0625	31.382353	52.611111	46.588235				43.88889	34		651.24933	54.27		31.3823
	D.O. % Level	3.9805263	5.614375	6.6441176	8.218125	5.0233333	3.8985	2.2473684	3.756	3.2593333	6.3805556	7.0107143	5.7592857		5.15	8.218125	2.24736
	Effluent pH	6.9552632	6.38125	6.1858824	7.1611765	7.1016667	6.9355	6.8210553	6.758	6.8307143				82.117334		7.1611765	
	Effluent Temp	9.5473684	8.8415789	10.6335	10.555556	12.971429	17.854545	19.715789	18.56	16.764286	14.984211	12.470588	11.735714	164.63457	13.72	19.715789	8.84157
Plant	Wasting Vol. m3	39583.37	29180.12	34122.72	126144.35	82698.97	51653.63	38366.57	50421.4	52381.94	71416.16	52919.48	50428.37	679317.08	56609.76	0	
	Chlorine (Kg)													0			
	CI Dosage (mg/l)													0		0	
	Cl Residual(mg/l)	0.252263	0.0049188	0.0049118	0.0020176	0.0019	0.0005	0	0	0	0	0	0	0.2664779			
	Cl2 in Creek													0	#DIV/0!	0	
0															0.00		
Grit	Hauled (Volume)	177.00	0.10	005.5		040 5	00.5	000 5	400.04	400.04	040.04		404.0	0	0.00	0	
udge Hauled	Liquid Volume	177.92	240	335.5	202.5	216.5	22.5	269.5	163.64	163.64	240.91		181.8	2214.41			
adina ma/l	Phoenhorue	0.1104792	0.1634013	0 1770070	0 7762604	0.254264	0.181881	0.526566	0 7012224	0.6402665	0.6930036	0 363366	0 3403577	4.949152	0 /10/000	0 7762604	0 1104
auniy mg/L	Phosphorus BOD		4.5962025						0.7013224 3.3453196					4.949152			
	Suspended Solids		4.5962025													71.801178	

PERFORMANCE

ASSESSMENT

REPORTS

							SEWAGE P	ERFORMAN	ICE ASSESS	SMENT REI	PORT								
			COCHRANE	1					YEAR:			2023	<u> </u>						
PROJECT:		Cochrane V							WATER CO				ake / Abitibi	River					
PROJECT	IUM.:	No. 120003	55						DESIGN CA	PACITY:		5,600 cu. M	leters / day						
DESCRIPTI	ON:	Extended A	Aeration																
MONTH		FLOWS		BIOCHEM	1ICAL O2 DE			SUSP	ENDED SOL	IDS		P	HOSPHORU	s		DISINFE	CTION	C	AUSTIC
	TOTAL	AVG DAY	MAX DAY	AVG RAW		LOADING	PERCENT			LOADING	PERCENT			LOADING	PERCENT	AVG	KG.S	AVG	KG.S
	FLOW	FLOW	FLOW	BOD	BOD	BOD	REMOVAL	SS	SS	SS	REMOVAL	PHOS.	PHOS.	PHOS.	REMOVAL	CL2 RES	USED	DOSE	USED
	1000M3	1000M3	1000M3	(mg/L)	(mg/L)	(mg/L)		(mg/L)	(mg/L)	(mg/L)		(mg/L)	(mg/L)	(mg/L)		(mg/L)		(mg/L)	-
JAN	41.03	1.324	2.492	270.0	2.70	3.57	99.0		5.30	7.02	97.0	12.0		1.20	92.5	0.2523			
FEB	30.64	1.094	2.331	300.0	4.20	4.59	98.6		10.00	10.94	97.5	9.4	0.15	0.16	98.4	0.0049			
MAR	38.63	1.288	1.839	308.0	3.90	5.02	98.7	293.0	21.00	27.05	92.8	7.8	0.14	0.18	98.2	0.0049			
APR	95.07	3.169	6.087	306.0	5.50	17.43	98.2	380.0	9.60	30.42	97.5	8.9	0.24	0.78	97.2	0.0020			
MAY	60.52	1.952	5.292	65.5	4.70	9.17	92.8	41.0	11.00	21.47	73.2	2.3	0.13	0.25	94.4	0.0019			
JUN	34.38	1.146	1.935	150.0	110.00	126.06	26.7		35.70	40.91	84.7	0.6	0.16	0.18	71.6	0.0050			
JUL	33.88	1.255	1.560	170.0	2.10	2.64	98.8		4.70	5.90		6.8		0.54	93.7	0.0000			
AUG	49.38	1.593	2.935	220.0	2.10	3.35	99.0		1.30	2.07		5.4		0.70	91.9	0.0000			
SEP	49.07	1.753	3.688	230.0	3.80	6.66	98.3	118.0	2.00	3.51	98.3	3.6		0.64	89.7	0.0000			
OCT	65.46	2.112	4.148	190.0	1.00	2.11	99.5	178.0	34.00	71.81	80.9	8.3		0.69	96.1	0.0000			
NOV	48.36	1.727	2.698	110.0	2.30	3.97	97.9		1.70	2.94		2.3		0.36	91.0	0.0000			
DEC	44.88	1.448	2.138	270.0	3.70	5.36	98.6		8.00	11.58		5.8	0.24	0.34	95.9	0.0000			
OTAL VG	591.303	1.655		215.8	12.17		92.18	67.7 145.0	12.03	•	100.0 93.43	6.1	0.31		92.55	0.0226	#DIV/0!	#DIV/0!	#DIV/0!
/AX		1.000	6.087	100.0	110.00		52.10	6.0	35.70		33.43	12.0			52.55	0.2523	#D17/0!	#DIV/0:	0.00
RITERIA		5.600	11.500	100.0	20.00	230.00		4.0	20.00	230.00		12.0	1.00			0.2323	0.00	0.0	0.00
					_0.00			4.4											
COMPLIAN	CE	YES			YES			aaaaraaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	YES				YES						
OMMENT	S:																		

				SEWAG		MANCE ASS	SESSMENT	REPORT					
MUNICIPAL	ITY:		COCHRANE					YEAR:		2023			
PROJECT:		COCHRAN	E WPCP					WATER CO	OURSE:	LILLABELLI	E LAKE / ABITIBI RIVE	R	
WORKS NU	JMBER:	12000355						DESIGN C	APACITY:	5,600 cu. me	eters/day		
DESCRIPTI	ION:	Extended	Aeration										
MONTH													
	NITRATE	NITRATE	NITRITE	NITRITE			PERCENT	TKN	TKN	PERCENT	PHOSPHATE	PHOSPHATE	PERCENT
									EFFLUENT		RAW ¹	EFFLUENT ²	REMOVAL
							REIVIOVAL			REIVIOVAL			REIVIOVAL
14 NI	(mg/l)	(mg/l)	(mg/l)	(mg/L) 0.05	(mg/L)	(mg/l)	97.96	(mg/L) 175.00	(mg/l) 16.10	90.80	(mg/L)	(mg/l)	07.00
JAN FEB	0.10 0.05		0.10	0.05		0.89					8.19 20.30	0.18	
			0.05	0.05	1	0.58				1			1
MAR	0.05		0.05			0.40					15.90	0.28	
APR	0.05		0.05	0.10	1	1.33					18.30	0.30	
MAY	0.10		0.10	0.05		0.26					2.18	0.07	
JUN	37.30		0.05	0.05		0.37					0.14	0.16	
JUL	0.10		0.10	0.05		0.48					15.10	11.90	
AUG	0.05		0.05	0.05		0.50	1				8.30	0.38	
SEPT	0.10		0.01	0.05		0.55					4.90	0.19	
OCT	0.05		0.05	0.05		0.21					14.10	0.12	
NOV	0.05		0.24	0.05		0.35					2.31	0.06	
DEC	0.25	24.40	0.25	0.01	33.00	0.42	98.73	82.10	10.00	87.82	9.13	0.14	98.49
TOTAL													
AVG	0.10	19.15		0.05	37.42	0.53	95.39	108.78	14.59	70.81	9.90	1.16	82.42
MAX													
CRITERIA													
COMMENT	S:												
										<u> </u>			

BYPASS SUMMARY NOTIFICATION AND LAB RESULTS

ACILITY NAM		Cochrane Waste W	'ater Treatme	nt Plant			YEAR:	2023					
ATE:											S	ample Resu	lts
Date (yy/mm/dd)	Location	Type (PB/SB/STPO /CSO/SSO/STWO)	Start Time	Duration (hours)	Volume (m3)	M/E	Disinfection (Y/N)	Treatment (Y/N)	Reason Code*	BOD5 (mg/L)	SS (mg/L)	TP (mg/L)	E.Coli (/100ml
2023-04-10	STP	STOP	12:30	220.5	1933	E	N	N	2	26.88	65.068	0.86904	437560
2023-04-30	STP	STOP	23:20	55.5	7,470	E	N	N	2	23.1125	63.25	0.88225	197052
2023-06-30	STP	STOP	18:30	15	563.9	E	N	N	2	85	801.5	3.77	197500
2023-08-02	STP	STOP	17:55	28	312.8	E	N	N	1	59.95	120	1.577	127500
2023-08-11	STP	STOP	7:20	12	9,347	Е	N	N	1	97	313	4.25	200
2023-09-07	STP	STOP	2:06	8	569.9	E	N	N	1	180	708	2.525	230000
2023-09-13	STP	STOP	11:37	4	500	E	N	N	1	8.3	39	0.567	3000
egend													
B = Primary By B = Secondary TPO = Sewage SO = Combine SO = Sanitary TWO = Satellit	Bypass Treatment Pl d Sewer Over Sewer Overflo	flow	M = Measured E = Estimated		Y = Yes N = No		*Reason Codes: 1 = Heavy Prec 2 = Spring Run 3 = Infiltration 4 = Mechanical 5 = Pipe Failure	off /Equipment Fa		6 = Process 7 = Power C 8 = Unknow 9 = Other, p)utages n	nent below.	

<u>SEWAGE PLANT/LIFT STATION(S)</u> OVERFLOW BYPASS, SPILL, OR LEAK REPORTING ID # 120000355

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: April 10 2023	Time of Call: <u>12:30</u> a.m. p.m.
Reference #: /- 3 5 1 YBF	Person Who Called: A: Les relson
Office Called: See Repo	rted By: Brez
Bypass: Spill: Lea	k:Overflow:
Location of Incident: Lottester	respenderpland
Time of Incident: 12:15a.m./p.m. Received	r: Lillable creele
Details of Incident: Over flow	1 ⁰¹
Downstream Users: <u>Non</u> . Possible Effects on Receiver, Environment or Dow	
NOTE: Take 2 Raw Sewage Samples Per Inciden the overflow: 1. 5-day BOD and CBOD, Suspended Solids, Addition Calls Tour Helly Phone No. 272, 4261 - Few No. 27	, pH, TKN and Total phosphorus
Town Hall: Phone No. 272-4361 Fax No. 2'	
Details of Call:	
Date: 09-18-23 Time of Call: 10100 P	Person Contacted: Brinds
Time of Termination: 05.'00 Approximat	e Volume: 1833.08 Cu. Meters
Current Status: Chlorinating? Yes: No:	Explain:
Further Action Required: None	······································
Reported By: Mula Nolsa	

SForm.014.8ypa.2013



CERTIFICATE OF ANALYSIS - REVISED

Supersedes report printed: 04/17/2023 15:28

Client:	Michael Nelson	Work Order Number:	495233
Company:	Town of Cochrane - Wastewater	PO #:	11885
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, POL 1C0	Project #:	Overflow
Phone:	(705) 272-9093	DWS #:	
Email:	michael.nelson@cochraneontario.com	Sampled By:	Michael Nelson
Date Order Received:	4/11/2023	Analysis Started:	4/12/2023
Arrival Temperature:	21 °C	Analysis Completed:	4/18/2023

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1866507	Wastewater	Grab		4/10/2023	12:20 PM
Sewage Plant Overflow	1866508	Wastewater	Grab		4/10/2023	5:10 PM
Sewage Plant Overflow	1866509	Wastewater	Grab		4/10/2023	11:00 PM
Sewage Plant Overflow	1866510	Wastewater	Grab		4/11/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350,1
Anions Water (mg/L by tC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Blochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,



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Town of Cochrane - Wastewater

TSS (A27)	Method
Timmins	Lab
Determination of Total Suspended Solids in water by gravimetry	Description
Modified from SM-2540	Reference

REPORT COMMENTS

Report Revised to correct BOD/CBOD Results to a dilution/data entry error on sample Sewage Plant Overflow (1866508) - 041923 TP REF NC20641

This report has been approved by

Adam Tam, M.Sc. Laboratory Director

Page 3 of 4

Escherichia colí	Microbiology	Lab ID	Sample Date	Sample [Total Phos	Total Kjeld	рн	Ammonia (as N)	General (Lab ID	Sample Date	Sample [Nitrite (as N)	Nitrate (as N)	Anions	Lab ID	
a colí	V£0		Date	Sample Description	Total Phosphorus (as P)	Total Kjeldahl Nitrogen		as N)	General Chemistry		Date	Sample Description	N)	N)			
4500000	Result	1866507	4/10/2023 12:20 PM	Sewage Plant Overflow	1.80 [1.74]	38.6	6.82	6.96	Result	1866507	4/10/2023 12:20 PM	Sewage Plant Overflow	<0.05	<0.05	Result	1866507	
100000	MDL	507	12:20 PM	nt Overflow	0.01	0.4	N/A	0.03	MDL	507	12:20 PM	nt Overflow	0.05	0.05	MDL	507	
550000	Result	1866508	4/10/2023 5:10 PM	Sewage Plant Overflow	0.548	7.1	6.91	1.42	Result	1866508	4/10/2023 5:10 PM	Sewage Plant Overflow	0.30	1.21	Result	1866508	
100000	MDL	3508	3 5:10 PM	nt Overflow	0.002	0.4	N/A	0.01	MDL	508	5:10 PM	nt Overflow	0.05	0.05	MDL	508	
7200000	Result	1866509	4/10/2023 11:00 PM	Sewage Plant Overflow	0.450	6.7	6.98	1.54	Result	1866509	4/10/2023 11:00 PM	Sewage Plant Overflow	0.26	2.21	Result	1866509	
100000	MDL	3509	11:00 PM	int Overflow	0.006	0.4	N/A	0.01	MDL	509	11:00 PM	int Overflow	0.05	0.05	MDL	509	
100000	Result	1866510	4/11/2023 7:00 AM	Sewage Plant Overflow	4.83	9.9	7.08	2.18	Result	1866510	4/11/2023 7:00 AM	Sewage Plant Overflow	0.26	2.62	Result	1866510	
100000	MDL	510	7:00 AM	nt Overflow	0.02	0.4	N/A	0.01	MDL	510	7:00 AM	nt Overflow	0.05	0.05	MDE	510	
CFU/100mL	Units				mg/L	mg/L	pН	mg/L	Units				mg/L	mg/L	Units		

CERTIFICATE OF ANALYSIS - REVISED

Supersedes report printed: 04/17/2023 15:28

Work Order Number: 495233

Committed to Quality and Service **TESTMARK** Laboratories Ltd.

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description

Sewage Plant Overflow 4/10/2023 12:20 PM

Sewage Plant Overflow 4/10/2023 5:10 PM

Sewage Plant Overflow 4/10/2023 11:00 PM

Sewage Plant Overflow 4/11/2023 7:00 AM

Sample Date 0 0



Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS - REVISED

Supersedes report printed: 04/17/2023 15:28

Work Order Number: 495233

Total Suspended Solids	Solids	Lab ID	Sample Date	Sample Description	Carbonaceous BOD	BOD (5 day)	Oxygen Demand	Lab ID	Sample Date	Sample Description
432	Result	186	4/10/2023	Sewage Pt	[68]	(08) 66	Result	186	4/10/2023	Sewage Pl
4	MDL	1866507	4/10/2023 12:20 PM	Sewage Plant Overflow	30	30	MDL	1866507	4/10/2023 12:20 PM	Sewage Plant Overflow
158	Result	186	4/10/202	Sewage Pl	9.2	41	Result	186	4/10/202	Sewage Pt
2	MDL	1866508	4/10/2023 5:10 PM	Sewage Plant Overflow	6	30	MDL	1866508	4/10/2023 5:10 PM	Sewage Plant Overflow
67	Result	186	4/10/2023	Sewage Pla	15	14	Result	186	4/10/2023	Sewage Pla
	MDL	1866509	4/10/2023 11:00 PM	Sewage Plant Overflow	თ	σ	MDL	1866509	4/10/2023 11:00 PM	Sewage Plant Overflow
45.30	Result	1866	4/11/2023	Sewage Plant Overflow	14	16	Result	1866	4/11/2023 7:00 AM	Sewage Pla
0.67	MDL	1866510	4/11/2023 7:00 AM	ant Overflow	Ø	Ø	MDL	1866510	3 7:00 AM	Sewage Plant Overflow
mg/L	Units				mg/L	mg/L	Units			

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations. Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

Reproduction of Report; Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.



Date Order Received: 4/12/2023 Arrival Temperature: 18 °C	Email: Melissa.	Phone: (705) 272-9093	Cochran	Address: 171 Fou	Company: Town of	Client: Melissa
23	Melissa.Hoogenhoud@cochraneontario.com	2-9093	Cochrane, ON, P0L 1C0	171 Fourth Ave, Box 490	Town of Cochrane - Wastewater	Melissa Hoogenhoud
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
4/13/2023 4/18/2023	Benoit Parent		Overflow	Information not provided	11885	495480

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1867402	Wastewater	Grab		4/11/2023	3:00 PM
Sewage Plant Overflow	1867403	Wastewater	Grab		4/11/2023	11:00 PM
Sewage Plant Overflow	1867404	Wastewater	Grab		4/12/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus In Water.	Modified from EPA 365.3 and ESS 310.2
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Date of Issue: 04/19/2023 11:17

TESTMARK Laboratories Ltd. Committed to Quality and Service

CERTIFICATE OF ANALYSIS

Work Order Number: 495480

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

TESTMARK Laboratories Ltd. Committed to Quality and Service

CERTIFICATE OF ANALYSIS

Work Order Number: 495480

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Escherichia coli	Microbiology	Lab ID	Sample Date	Sample Description	Total Phosphorus (as P)	Total Kjeldahl Nitrogen	рH	Ammonia (as N)	General Chemistry	Lab ID	Sample Date	Sample Description	Nitrite (as N)	Nitrate (as N)	Anions	Lab ID	Sample Date	Sample Description	
					9)														
2530000	Result	1867402	4/11/2023 3:00 PM	Sewage Plant Overflow	0.419	7,1	7.04	1.60	Result	1867402	4/11/2023 3:00 PM	Sewage Plant Overflow	0.34	1.86	Result	1867402	4/11/2023 3:00 PM	Sewage Plant Overflow	
10000	MDL	402	3:00 PM	n Overflow	0.002	0.4	NVA	0.01	MDL	\$02	3.00 PM	t Overflow	0,05	0.05	MDL	102	3:00 PM	rt Overflow	
5100000	Result	1867403	4/11/2023 11:00 PM	Sewage Plant Overflow	0.372	6.5	7.02	1.06	Result	1867403	4/11/2023 11:00 PM	Sewage Plant Overflow	<0.05	3,35	Result	1867403	4/11/2023 11:00 PM	Sewage Plant Overflow	
100000	MDL	1403	11:00 PM	nt Overflow	0.002	0.4	N/A	0.01	MDL	403	11:00 PM	nt Overflow	0.05	0.05	MDL	403	11:00 PM	nt Overflow	
540000 [520000]	Result	1867404	4/12/2023 7:00 AM	Sewage Plant Overflow	0.707	17,4	7.2	2.12	Result	1867404	4/12/2023 7:00 AM	Sewage Plant Overflow	<0.05	3.04	Result	1867404	4/12/2023 7:00 AM	Sewage Plant Overflow	
10000	MDL	404	7:00 AM	nt Overflow	0.002	0,4	N/A	0.01	MDL	404	7:00 AM	nt Overflow	0,05	0.05	MDL	404	7:00 AM	nt Overflow	
CFU/100mL	Units				mg/L	mg/L	ΡH	mg/L	Units				mg/L	mg/L	Units				

Date of Issue: 04/19/2023 11:17

1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca

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Work Order Number: 495480

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Total Suspended Solids	Solids	Lab ID	Sample Date	Sample Description	Carbonaceous BOD	BOD (5 day)	Oxygen Demand	Lab ID	Sample Date	Sample Description
96,5	Result	1867	4/11/2023 3:00 PM	Sewage Plant Overflow	19	16	Result	1867402	4/11/2023 3:00 PM	Sewage Plant Overflow
-	MDL	1867402	33:00 PM	int Overflow	6	6	MDL	7402	3:00 PM	nt Overflow
36.00	Result	186	4/11/2023	Sewage Pla	15	16	Result	1867403	4/11/2023 11:00 PM	Sewage Plant Overflow
0.67	MDL	1867403	4/11/2023 11:00 PM	Sewage Plant Overflow	ດ	9	MDL	7403	11:00 PM	int Overflow
25.5	Result	186	4/12/2023 7:00 AM	Sewage Pla	16	18	Result	186	4/12/2023 7:00 AM	Sewage Plant Overflow
-	MDL	1867404	3 7:00 AM	Sewage Plant Overflow	თ	G	MDL	1867404	3 7:00 AM	ant Overflow
mg/L	Units				mg/L	mg/L	Units			

LEGEND

Dates, Dates are formatted as mm/dd/year throughout this report.

MDL. Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.



Date Order Received: 4/13/2023 Arrival Temperature: 18 °C	Email: Melissa.H	Phone: (705) 272-9093	Cochrane		Company: Town of C	Client: Melissa H
	Melissa.Hoogenhoud@cochraneontario.com	-9093	Cochrane, ON, POL 1C0	171 Fourth Ave, Box 490	Town of Cochrane - Wastewater	Melissa Hoogenhoud
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
4/13/2023 4/20/2023	Benoit Parent		Overflow	Information not provided	11885	495663

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1867908	Wastewater	Grab		4/12/2023	3:00 PM
Sewage Plant Overflow	1867909	Wastewater	Grab		4/12/2023	11:00 PM
Sewage Plant Overflow	1867910	Wastewater	Grab		4/13/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coll in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjetdahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Date of Issue: 04/20/2023 16:09



Work Order Number: 495663

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

Date of Issue: 04/20/2023 16:09

Committed to Quality and Service

CERTIFICATE OF ANALYSIS

Work Order Number: 495663

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Escherichia coli	Microbiology	Lab ID	Sample Date	Sample Description	Total Phosphorus (as P)	Total Kjeldahl Nitrogen	рH	Ammonia (as N)	General Chemistry	Lab ID	Sample Date	Sample Description	Nitrite (as N)	Nitrate (as N)	Anions	Lab ID	Sample Date	Sample Description	
				otion	(as P)	ogen			stry			otion						otion	
26200000	Result	1867908	4/12/2023 3:00 PM	Sewage Plant Overflow	0.616 [0.606]	23.5	7.12	4.35	Result	1867908	4/12/2023 3:00 PM	Sewage Plant Overflow	0.28	<0.05	Result	1867908	4/12/2023 3:00 PM	Sewage Plant Overflow	U
100000	MDL	806	3:00 PM	nt Overflow	0.002	0.4	N/A	0.01	MDL	806	3:00 PM	nt Overflow	0.05	0.05	MDL	806	3:00 PM	nt Overflow	
6600000	Result	1867909	4/12/2023 11:00 PM	Sewage Plant Overflow	0.414	6.3	6.82	0.84	Result	1867909	4/12/2023 11:00 PM	Sewage Plant Overflow	0.30	3.01	Result	1867909	4/12/2023 11:00 PM	Sewage Plant Overflow	
100000	MDL	606	11:00 PM	nt Overflow	0.002	0.4	NIA	0.01	MDL	606	11:00 PM	nt Overflow	0.05	0.05	MDL	606	11:00 PM	nt Overflow	
290000 [310000]	Result	1867910	4/13/2023 7:00 AM	Sewage Plant Overflow	0.731	24.5	7.28	2.27	Result	1867910	4/13/2023 7:00 AM	Sewage Plant Overflow	0.27	2.79	Result	1867910	4/13/2023 7:00 AM	Sewage Plant Overflow	
10000	MDL	7910	3 7:00 AM	int Overflow	0.002	0,4	NJA	0.01	MDL	7910	37:00 AM	nt Overflow	0.05	0.05	MDL	910	17:00 AM	nt Overflow	
CFU/100mL	Units				mg/L	mg/L	pН	mg/L	Units				mg/L	mg/L	Units				

Date of Issue: 04/20/2023 16:09

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Page 3 of 4



Work Order Number: 495663

Town of	
Cochrane	
- Wastewater	

Sample Description Sample Date Lab ID Oxygen Demand BOD (5 day) Carbonaceous BOD	Sewage Plant Overflow 4/12/2023 3:00 PM 1867908 Result MDL 32 6 29 6 [27] 6 Sewage Plant Overflow	nt Overflow 13:00 PM 9908 6 6 6 6	Sewage Pt 4/12/2023 186 23 19 19	Sewage Piant Overflow 4/12/2023 11:00 PM 1867909 1867909 23 6 19 6 19 6 Sewage Plant Overflow	Sewage Plant Overflow 4/13/2023 7:00 AM 1867910 19 6 22 6 Sewage Plant Overflow	 Plant Overflow 2023 7:00 AM 1867910 MDL 6 6 6 6 6
Oxygen Demand	Result	MDL	Result	MDL	Result	
BOD (5 day)	32	6	23	თ	19	
Carbonaceous BOD	29 [27]	σ	19	σ	22	
Sample Description	Sewage Pla	nt Overflow	Sewage Pla	ant Overflow	Sewage Pla	=
Sample Date	4/12/2023 3:00 PM	3:00 PM	4/12/2023	4/12/2023 11:00 PM	4/13/2023 7:00 AM	2
Lab ID	1867908	806/	186	1867909	1867910	791
Solids	Result	MDL	Result	MDL	Result	
Total Suspended Solids	56.7	1.3	38.5		33.00	

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

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[] Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

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Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

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ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.



Melissa Hoogenhoud Town of Cochrane - Wastewater 171 Fourth Ave, Box 490 Cochrane, ON, POL 1C0 (705) 272-9093 Melissa.Hoogenhoud@cochraneontario.com 4/14/2023 22 °C	oogenhoud ochrane - Wastewater • Ave, Box 490 ON, POL 1C0 9093 oogenhoud@cochraneontario.com	Date Order Received: 4/14/2023 Arrival Temperature: 22 °C	Email: Meliss	Phone: (705)	Cochi		Company: Town	Client: Meliss
	Work Order Number: PO #: Regulation: Project #: DWS #: Sampled By: Analysis Started: Analysis Completed:	2023	sa.Hoogenhoud@cochraneontario.com	272-9093	rane, ON, POL 1C0	ourth Ave, Box 490	of Cochrane - Wastewater	sa Hoogenhoud

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1868313	Wastewater	Grab		4/13/2023	3:00 PM
Sewage Plant Overflow	1868314	Wastewater	Grab		4/13/2023	11:00 PM
Sewage Plant Overflow	1868315	Wastewater	Grab		4/14/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Date of Issue: 04/25/2023 16;42



Work Order Number: 495783

This report has been approved by:

Town of Cochrane - Wastewater

V

Adam Tam, M.Sc. Laboratory Director

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Committed to Quality and Service	TESTMARK Laboratories Ltd.

Work Order Number: 495783

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Sample Description Sample Date Lab ID Nitrate (as N) Nitrate (as N) Sample Description Sample Description General Chemistry Ammonia (as N) PH Total Kjeldahl Nitrogen	Sewage Plant Overflow 4/13/2023 3:00 PM 1868313 0.62 0.05 1.60 0.05 1.60 0.05 5.8wage Plant Overflow 4/13/2023 3:00 PM 4/13/2023 3:00 PM 1868313 7.11 MDL 2.43 0.01 7.11 N/A	nt Overflow 1313 0.05 0.05 0.05 313 13:00 PM 13:00 PM 13:00 PM 13:00 PM 13:00 PM 13:00 PM 13:00 PM 13:00 PM	Sewage Plant Overflow 4/13/2023 11:00 PM 1868314 Result MDL 3.12 0.05 <0.05 0.05 Sewage Plant Overflow 4/13/2023 11:00 PM 1868314 Result MDL 0.84 0.01 7.15 N/A	Int Overflow 11:00 PM 3314 0.05 0.05 0.05 0.05 11:00 PM 11:00 PM 11:00 PM 3314 0.01 N/A 0.4	Sewage Pia 4/14/202: 186: Result 3.37 <0.05 Sewage Pia 4/14/202: 186: Result 2.03 7.34 11.7	Sewage Plant Overflow 4/14/2023 7:00 AM 1868315 a.37 0.05 c0.05 0.05 c0.05 0.05 co.05 co.05 co.05 co.05 co.05 co.05 co.05
Sample Description Sample Date	Sewage Pla 4/13/2023	nt Overflow 3:00 PM	Sewage Pla 4/13/2023	Int Overflow 11:00 PM	Sewage Pla 4/14/202	ant Overfik 3 7:00 AM
Lab ID	1865	3313	1868	3314	186	8315
General Chemistry	Result	MDL	Result	MDL	Result	MDI
Ammonia (as N)	2.43	0.01	0.84	0.01	2.03	0.0
pH	7.11	N/A	7.15	N/A	7.34	N/A
Total Kjeldahl Nitrogen	7.4	0.4	5.6	0,4	11.7	0.4
Total Phosphorus (as P)	0.934	0.002	0.384	0.002	0.787	0.002
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	int Overflow	Sewage Pla	Sewage Plant Overflow
Sample Date	4/13/2023 3:00 PM	3:00 PM	4/13/2023 11:00 PM	11:00 PM	4/14/202:	4/14/2023 7:00 AM
Lab ID	1868313	313	1868314	8314	186	1868315
Microbiology	Result	MDL	Result	MDL	Result	MDL
Escherichia coli	7200000	100000	2400000	100000	1000000 [1200000]	100000

Date of Issue: 04/25/2023 16:42

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Work Order Number: 495783

Town
9
Cochrane -
- 5
Vastewater

Sample Description Sample Date Lab ID Oxygen Demand BOD (5 day) Carbonaceous BOD	Sewage Plant Overflow 4/13/2023 3:00 PM 1868313 Result MDL 26 26 12.9 1	nt Overflow 13:00 PM 1313 MDL 6	Sewage Pl 4/13/2023 186 11.6 9.6	Sewage Plant Overflow 4/13/2023 11:00 PM 1868314 1868314 11.6 MDL 11.6 1 9.6 1	Sewage Plant Overflow 4/14/2023 7:00 AM 1868315 Result MDL 13.1 1 12.6 1	ewage Plant Overflow 4/14/2023 7:00 AM 1868315 1868315 3.1 MDL 3.1 1 2.6 1
Oxygen Demand	Result	MDL	Result	MDL	Result	M
BOD (5 day)	26	6	11.6	1	13.1	
Carbonaceous BOD	12.9	Ч	9.6		12.6	_
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage PI	Sewage Plant Overflow	Sewage Plant Overflow	int Overflo
Sample Date	4/13/2023 3:00 PM	3:00 PM	4/13/202	4/13/2023 11:00 PM	4/14/202:	4/14/2023 7:00 AM
Lab ID	1868313	313	186	1868314	186	1868315
Solids	Result	MDL	Result	MDL	Result	MDL
Total Suspended Solids	60.00	0.67	29.30	0.67	31.70	0,67

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

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iCPMS Dustfall Insoluble: The ICPMS Dustfatt Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

Date of Issue: 04/25/2023 16:42



Date Order Received: 4/ Arrival Temperature: 20	Email: M	Phone: (7	0		Company: To	Client: M
4/16/2023 20 °C	Melissa.Hoogenhoud@cochraneontario.com	(705) 272-9093	Cochrane, ON, POL 1C0	171 Fourth Ave, Box 490	Town of Cochrane - Wastewater	Melissa Hoogenhoud
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
4/17/2023 4/24/2023	Benoit Parent		Overflow	Information not provided	11885	495828

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1868432	Wastewater	Grab		4/14/2023	3:00 PM
Sewage Plant Overflow	1868433	Wastewater	Grab		4/14/2023	11:00 PM
Sewage Plant Overflow	1868434	Wastewater	Grab		4/15/2023	7:00 AM
Sewage Plant Overflow	1868435	Wastewater	Grab		4/15/2023	3:00 PM
Sewage Plant Overflow	1868436	Wastewater	Grab		4/15/2023	11:00 PM
Sewage Plant Overflow	1868437	Wastewater	Grab		4/16/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by ton Selective Electrode	Modified from APHA-4500H+ B

Date of Issue: 04/24/2023 17:44



Work Order Number: 495828

Town of Cochrane - Wastewater

Method	Lab	Description	Reference
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

This report has been approved by:

J

Adam Tam, M.Sc. Laboratory Director

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CERTIFICATE OF ANALYSIS

Work Order Number: 495828

WORK ORDER RESULTS

Town of Cochrane - Wastewater

WORN ORDER RESULTS	U								
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	rt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	4/14/2023 3:00 PM	3:00 PM	4/14/2023 11:00 PM	11:00 PM	4/15/2023 7:00 AM	7:00 AM	4/15/2023 3:00 PM	3:00 PM	
Lab ID	1868432	432	1868433	133	1868434	434	1868435	135	
Anions	Result	MDL	Result	M D L	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	1.45	0.05	2.87	0.05	0,08	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.83	0.05	0.37	0.05	1.27	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	tt Overflow					
Sample Date	4/15/2023 11:00 PM	11:00 PM	4/16/2023 7:00 AM	7:00 AM					
Lab ID	1868436	436	1868437	437					
Anions	Result	MDL	Result	MDL	Units				
Nitrate (as N)	2.51	0.05	2.80	0.05	mg/L				
Nitrite (as N)	<0.05	0.05	<0.05	0.05	mg/L				
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	rt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/2023 3:00 PM	13:00 PM	4/14/2023 11:00 PM	11:00 PM	4/15/2023 7:00 AM	7:00 AM	4/15/2023 3:00 PM	3:00 PM	
Lab ID	1868432	1432	1868433	433	1868434	434	1868435	435	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	4.23	0.01	2.25	0.01	4.16	0.01	2.49	0.01	mg/L
рH	7.07	N/A	7.07	N/A	7.23	N/A	7.04	NIA	рH
								•	

Date of Issue: 04/24/2023 17:44

Total Kjeldahl Nitrogen Total Phosphorus (as P)

11.6 0.883

0.4

5.8 0.408

0.4

13.1 0.627

0.4

9.3 0.702

0.4

mg/L

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CERTIFICATE OF ANALYSIS

Work Order Number: 495828

Town of Cochrane - Wastewater

Sewage Plant Overflow 4/15/2023 3:00 PM 1868435 Result MDL 8000000 100000	Sample Description Sewage Plant Overflow Sewage Plant Overflow 4/15/2023 11:00 PM 4/15/2023 7:00 AM	Microbiology Result MDL Result Result MDL Result Result	Sample Date 4/14/2023 3:00 PM 4/14/2023 1:00 PM 4/14/2023 1:00 PM Lab ID 1868432 1868433 1868434	ription Sewage Plant Overflow S	Total Kjeldabi Nitrogen 6.6 0.4 6.0 0.4 mg/L Total Phosphorus (as P) 0.418 0.002 0.288 0.002 mg/L	Ammonia (as N) 2.25 0.01 1.29 0.01 mg/L pH 7.15 N/A 7.37 N/A pH	General Chemistry Result MDL Result MDL Units	Lab ID 1868436 1868437	Sample Date 4/15/2023 11:00 PM 4/16/2023 7:00 AM	Sample Description Sewage Plant Overflow Sewage Plant Overflow
1868435			1868434	Arispons 7-00 AM	mg/L mg/L	mg/L	Units			
MDL										
		MDL	¥35	Int Overflow						

Date of Issue: 04/24/2023 17:44

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Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 495828

Sample Description	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	4/14/2023 3:00 PM	3:00 PM	4/14/2023 11:00 PM	11:00 PM	4/15/2023 7:00 AM	7:00 AM	4/15/2023 3:00 PM	3:00 PM	
Lab ID	1868432	132	1868433	433	1868434	434	1868435	135	
Oxygen Demand	Result	MDL	Result	MOL	Result	MDL	Result	MDL	Units
BOD (5 day)	33	6	12.3	1	7.4	-	35	6	mg/L
Carbonaceous BOD	21	o	10.7	-	9.6		33	თ	mg/L
Sample Description	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	nt Overflow					
Sample Date	4/15/2023 11:00 PM	11:00 PM	4/16/2023 7:00 AM	7:00 AM					
Lab ID	1868436	136	1868437	437					
Oxygen Demand	Result	MDL	Result	MDL	Units				
BOD (5 day)	12.7	1	6.9	1	mg/L				
Carbonaceous BOD	11.2		თ	-	mg/L				
	Sewana Plant Overflow	nt Overflow	Sewane Plant Overflow	nt Overflow	Seware Plant Overflow	nt Ovenflow	Sewage Plant Overflow	It Overflow	

Total Suspended Solids	Solids	Lab ID	Sample Date	Sample Description	Carbonaceous BOD 1
56	Result	1868432	4/14/2023 3:00 PM	ewage Plar	11.2
1	MDL	432	3:00 PM	Sewage Plant Overflow	_
29.70	Result	1868433	4/14/2023 11:00 PM	Sewage Plant Overflow	۵ ا
0.67	MDL	433	11:00 PM	nt Overflow	_
37.5 [38.5]	Result	1868	4/15/2023 7:00 AM	Sewage Plant Overflow	mg/Ľ
-	MDL	1868434	3 7:00 AM	int Overflow	
8	Result	1868	4/15/2023 3:00 PM	Sewage Plant Overflow	
	MDL	1868435	3:00 PM	nt Overflow	
mg/L	Units				



Work Order Number: 495828

Town of Cochrane - Wastewater

		Ant Owner		ne Overflow	
Sample Description	Sewage Pla	Sewage Plant Overnow	Sewage Plant Overnow	IN OVERHOW	
Sample Date	4/15/2023	4/15/2023 11:00 PM	4/16/2023 7:00 AM	57:00 AM	
Lab ID	186	1868436	1868437	437	
Solids	Result	MDL	Result	MDL	Units
Total Suspended Solids	42.5		14.30	0.67	mg/L

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received

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Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client. ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method



Date Order Received: 4/ Arrival Temperature: 19	Email: M	Phone: (7	0	Address: 17	Company: To	Client: M
4/18/2023 19 °C	Melissa.Hoogenhoud@cochraneontario.com	(705) 272-9093	Cochrane, ON, POL 1C0	171 Fourth Ave, Box 490	Town of Cochrane - Wastewater	Melissa Hoogenhoud
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
4/18/2023 4/25/2023	Benoit Parent		Overflow	Information not provided	11885	496122

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1869485	Wastewater	Grab		4/16/2023	3:00 PM
Sewage Plant Overflow	1869486	Wastewater	Grab		4/16/2023	11-00 PM
Sewage Plant Overflow	1869487	Wastewater	Grab		4/17/2023	7:00 AM
Sewage Plant Overflow	1869488	Wastewater	Grab		4/17/2023	3:00 PM
Sewage Plant Overflow	1869489	Wastewater	Grab		4/17/2023	11:00 PM
Sewage Plant Overflow	1869490	Wastewater	Grab		4/18/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B

Date of Issue: 04/25/2023 16:42

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CERTIFICATE OF ANALYSIS

Work Order Number: 496122

Town of Cochrane - Wastewater

Method	Lab	Description	Reference
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Work Order Number: 496122

WORK ORDER RESULTS

Town of Cochrane - Wastewater

	U								
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/16/2023 3:00 PM	3:00 PM	4/16/2023 11:00 PM	11:00 PM	4/17/2023 7:00 AM	7:00 AM	4/17/2023 3:00 PM	3:00 PM	
Lab ID	1869485	485	1869486	486	1869487	487	1869488	488	
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0,05	0.05	<0.05	0.05	2.35	0.05	<0.05	0.05	mg/L
Nitrite (as N)	<0.05	0.05	<0.05	0.05	0.27	0.05	0.45	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow					
Sample Date	4/17/2023 11:00 PM	11:00 PM	4/18/2023 7:00 AM	7:00 AM					
Lab ID	1869489	489	1869490	490					
Anions	Result	MDL	Result	MDL	Units				
Nitrate (as N)	1.28	0.05	0,36	0.05	mg/L				
Nitrite (as N)	0.82	0.05	0.55	0.05	mg/L				
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	n Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/16/2023 3:00 PM	3:00 PM	4/16/2023 11:00 PM	11:00 PM	4/17/2023 7:00 AM	7:00 AM	4/17/2023 3:00 PM	3:00 PM	
Lab ID	1869485	485	1869486	486	1869487	487	1869488	488	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	3.23	0.01	3.30	0.01	4.48	0.01	4.17	0.01	mg/L
PH	7.13	N/A	7.32	NIA	7.48	N/A	7.23	N/A	рн
Total Kjeldahl Nitrogen	9.4	0.4	9.8	0.4	9.9	0.4	12.0	0.4	mg/L

Date of Issue: 04/25/2023 16:42

Total Phosphorus (as P) Total Kjeldahl Nitrogen

0.735 9.4

0.002

0.681

0.002

0.605

0.002

0.715 12.0

0.002

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CERTIFICATE OF ANALYSIS

Work Order Number: 496122

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Sample Description Sample Date Lab ID General Chemistry Ammonia (as N) pH Total Kjeldahl Nitrogen Total Phosphorus (as P)		• Plant Overflow 2023 11:00 PM 1869489 0.61 0.01 0.4 0.02	Sewage Plant Overflow 4/18/2023 7:00 AM 1869490 3.63 0.01 7.39 N/A 20.5 0.4 2.11 0.02	17:00 AM 37:00 AM 3490 0.01 0.01 0.01 0.02	Units mg/L pH			
Ammonia (as N) pH	2.19 7.22	0.01 N/A	3.63 7.39	0.01 N/A	mg/L pH			
Total Kjeldahl Nitrogen	7.9	0,4	20.5	0.4	mg/L			
Total Phosphorus (as P)	0.562	0.002	2.11	0.02	mg/L			
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	int Overflow	Sewage Pl	Sewage Plant Overflow	Sewage Plant Overflow	int Over
Sample Date	4/16/2023 3:00 PM	3 3:00 PM	4/16/2023 11:00 PM	11:00 PM	4/17/202	4/17/2023 7:00 AM	4/17/2023 3:00 PM	3 3:00 PN
Lab ID	1869	1869485	1869486	9486	186	1869487	186	1869488
Microbiology	Result	MDL	Result	MDL	Result	MDL	Result	MDL
Escherichia coli	15000000	100000	10500000	100000	300000	10000	6800000	100000
Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	Int Overflow				
Sample Date	4/17/2023 11:00 PM	11:00 PM	4/18/2023 7:00 AM	3 7:00 AM				
Lab ID	186	1869489	1869490	3490				
Microbiology	Result	MDL	Result	MDL	Units			
Escherichia coli	1800000	100000	360000 [250000]	10000	CFU/100mL			

Sample Description Sample Date Lab ID	Sewage Plant Overflow 4/16/2023 3:00 PM 1869485	nt Overflow 3:00 PM 1485	Sewage Pl 4/16/2023	Sewage Plant Overflow 4/16/2023 11:00 PM 1869486	Sewage Plant Overflow 4/17/2023 7:00 AM 1869487	int Overflow 3 7:00 AM 9487		Sewage Pla 4/17/2023 1869	Sewage Plant Overflow 4/17/2023 3:00 PM 1869488
ЪD	1869	485	186	9486	1863	9487		1869	1869488
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	۲	DL Result	
BOD (5 day)	44	6	41	თ	11.2		1	1 35	1 35 6
Carbonaceous BOD	48	6	27	σ	11.8		-	1 34	1 34 6
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Pl	Sewage Plant Ovenflow					
Sample Date	4/17/2023 11:00 PM	11:00 PM	4/18/202	4/18/2023 7:00 AM					
Lab ID	1869489	1489	186	1869490					
Oxygen Demand	Result	MDL	Result	MDL	Units				
BOD (5 day)	27	6	57	6	mg/L				
Carbonaceous BOD	15	1	63.9	თ	mg/L				
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Pl	Sewage Plam Overflow	Sewage Plant Overflow	- E	t Overflow		t Overflow Sewage Plant Overflow
Sample Date	4/16/2023 3:00 PM	3:00 PM	4/16/2023	4/16/2023 11:00 PM	4/17/2023 7:00 AM		7:00 AM		4/17/2023 3:00 PM
Lab ID	1869485	1485	186	1869486	1869487	Ψ	487		1869488
Solids	Result	MDL	Result	MDL	Result		MDL	MDL Result	
Total Suspended Solids	54.5	1	47	1	18.30		0.67	0.67 40	
Sample Description	Sewage Plant Overflow	nt Overflaw	Sewage Pt	Sewage Plant Overflow					
Sample Date	4/17/2023 11:00 PM	11:00 PM	4/18/202	4/18/2023 7:00 AM					
Lab ID	1869489	1489	186	1869490					
Solids	Recult	MDL	Result	MDL	Units				
	1 COOL								

Town of Cochrane - Wastewater

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Work Order Number: 496122

Date of Issue: 04/25/2023 16:42

1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca

Page 5 of 6



Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 496122

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received. Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Dependencies of Depend chall not be concretioned except in full without the approval of Testmark Laboratories (Id

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Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client. ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

SEWAGE PLANT/LIFT STATION(S) OVERFLOW BYPASS, SPILL, OR LEAK REPORTING ID # 120000355

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: 04-30-23		Time of (Call: 23; 20 a.m./	′p.m.
Date: $0 - 30 - 33$ Reference #: $1 - 3 = 1 $	Que	Person W	ho Called: Jukn	
Office Called: <u>5 A C</u>	3 3 ₩ 0 Repo	orted By:	mile notson	ı
Bypass: Spill:	Lea	ık:	Overflow:	1
Location of Incident:				
Time of Incident: 2300				
Details of Incident:	r Aon d	ive to	Rein	
	8			
Downstream Users:	lone			
Possible Effects on Receiver,				
NOTE: Take 2 Raw Sewage the overflow: 1. 5-day BOD and CBOI Addition Calls Town Hall: Phone No. 272-	D, Suspended Solids	, pH, TKN a	nd Total phosphorus	C
Details of Call:				
Termination of Incident				
Date: Mey 2/23 Time of (Call: P	erson Conta	cted:	
Time of Termination: <u>3700</u>				
Current Status: Chlorinating?	Yes: No:	<u> </u>		
Further Action Required:	none	.a.,		
Reported By: Mile	elson			

SForm.014.Bypa.2013

TESTMARK Laboratories Ltd.

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CERTIFICATE OF ANALYSIS

Client:	Melissa Hoogenhoud	Work Order Number:	497512
Company:	Town of Cochrane - Wastewater	PO #:	11885
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone:		DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	
Date Order Received: Arrival Temperature:	5/2/2023 20 °C	Analysis Started: Analysis Completed:	5/2/2023 5/9/2023

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1874810	Wastewater	Grab		4/30/2023	11:00 PM
Sewage Plant Overflow	1874811	Wastewater	Grab		5/1/2023	7:00 AM
Sewage Plant Overflow	1874812	Wastewater	Grab		5/1/2023	3:00 PM
Sewage Plant Overflow	1874813	Wastewater	Grab		5/1/2023	11:00 PM
Sewage Plant Overflow	1874814	Wastewater	Grab		5/2/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Determination of Ammonia/Ammonium in Water Determination of Anions in Water by Ion Chromatography Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from EPA 350.1 Modified from SW846-9056A Modified from SM-5210 B
Determination of Anions in Water by Ion Chromatography Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SW846-9056A Modified from SM-5210 B
Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
Determination of Total Kjeldahl Nitrogen in Wat	ective Electrode ers with Block Digestion.

Date of Issue: 05/09/2023 16:28

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Page 1 of 6

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CERTIFICATE OF ANALYSIS

Work Order Number: 497512

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Method	Lab	Description	Reference
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

Town of Cochrane - Wastewater	L								Work Order N
WORK ORDER RESULTS	S								
Sample Description	Sewage Plai	Plant Overflow	Sewage Plant Overflow	int Overflow	Sewage Plant Ovenflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/30/2023 11:00 PM	11:00 PM	5/1/2023 7:00 AM	7:00 AM	5/1/2023 3:00 PM	3:00 PM	5/1/2023 11:00 PM	11:00 PM	
Lab ID	1874	874810	1874811	1811	1874	1874812	1874813	813	
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	0.57	0.05	0.41	0.05	1.71	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.35	0.05	0.63	0.05	0.26	0.05	mg/L
Sample Description	Sewage Plai	Plant Overflow							
Sample Date	5/2/2023 7:00 AM	7:00 AM							
Lab ID	1874	874814							
Anions	Result	MDL	Units						
Nitrate (as N)	2.17	0.05	mg/L						
Nitrite (as N)	0.14	0.05	mg/L						
Sample Description	Sewage Plai	Plant Ovenflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Ovenflow	nt Ovenflow	
Sample Date	4/30/2023 11:00 PM	11:00 PM	5/1/2023 7:00 AM	7:00 AM	5/1/2023 3:00 PM	3:00 PM	5/1/2023 11:00 PM	11:00 PM	
Lab ID	1874	874810	1874811	4811	1874812	1812	1874813	1813	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	4.15	0.01	3.57	0.01	1.74	0.01	1.60	0.01	mg/L
Hd	6.83	N/A	7.26	N/A	7.16	N/A	7.29	N/A	Н
Total Kjeldahl Nitrogen	22.9	0.4	12.3	0.4	6.5	0.4	9.5 [9.4]	0.4	mg/L
Total Phosphorus (as P)	1.38	0.02	1.20	0.02	0.749	0.002	0.552	0.002	mg/L

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Nork Order Number: 497512

Date of Issue: 05/09/2023 16:28

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Page 3 of 6

Town of Cochrane - Wastewater	L								Work Order	Work Order Number: 497512
Sample Description Sample Date Lab ID General Chemistry Ammonia (as N) pH	Sewage Plant Overflow 5/2/2023 7:00 AM 5/2/2023 7:00 AM 1874814 Result 1.01 7.48 N/A	int Overflow 7:00 AM 4814 MDL 0.01 N/A	Units mg/L PH							
Total Kjeldahl Nitrogen Total Phosphorus (as P)	6.4 0.522	0.4 0.002	mg/L mg/L							
Sample Description Sample Date	Sewage Plant Overflow 4/30/2023 11:00 PM	Int Overflow 11:00 PM	Sewage Plant Overflow 5/1/2023 7:00 AM	t Overflow :00 AM	Sewage Plant Overflow 5/1/2023 3:00 PM	at Overflow 3:00 PM	Sewage Plant Overflow 5/1/2023 11:00 PM	tt Overflow 1:00 PM		
Lab ID	1874	1874810	1874811	11	1874812	812	1874813	813		
Microbiology	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units	
Escherichia coli	2720000 [2530000]	10000	406000 [385000]	1000	830000	10000	1160000	10000	CFU/100mL	
Sample Description	Sewage Plant Overflow	int Overflow								
Sample Date	5/2/2023	5/2/2023 7:00 AM								
Lab ID	1874	1874814								
Microbiology	Result	MDL	Units							
Escherichia coli	68200	200	CFU/100mL							

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Date of Issue: 05/09/2023 16:28

1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca

Samule Description	Sewage Pl	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Pla	Sewage Plant Overflow	
Sample Date	4/30/2023	4/30/2023 11:00 PM	5/1/2023 7:00 AM	7:00 AM	5/1/2023 3:00 PM	3:00 PM	5/1/2023	5/1/2023 11:00 PM	
Lab ID	187	1874810	1874811	811	1874812	812	1874	1874813	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	46	g	20	9	22	9	9.2	9	mg/L
Carbonaceous BOD	7.77	9	22	9	14	9	14.9	F	mg/L
Sample Description	Sewage Pi	Sewage Plant Ovenflow							
Sample Date	5/2/202:	5/2/2023 7:00 AM							
Lab ID	187	1874814							
Oxygen Demand	Result	MDL	Units						
BOD (5 day)	6.7	g	mg/L						
Carbonaceous BOD	9>	Q	mg/L						
Sample Description	Sewage Pt	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Ovenflow	Sewage Pla	Sewage Plant Overflow	
Sample Date	4/30/2023	4/30/2023 11:00 PM	5/1/2023 7:00 AM	7:00 AM	5/1/2023 3:00 PM	3:00 PM	5/1/2023	5/1/2023 11:00 PM	
Lab ID	187	1874810	1874811	811	1874812	812	1874	1874813	
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	145	2	73.3	1.3	70.7	1.3	44.70	0.67	mg/L
Sample Description	Sewage Pl	Sewage Plant Ovenflow							
Sample Date	5/2/202:	5/2/2023 7:00 AM							
Lab ID	187	1874814							
Solids	Result	MDL	Units						
Total Suspended Solids	42 30	0.67	l/om						

TESTMARK Laboratories Ltd. Committed to Quality and Service

Date of Issue: 05/09/2023 16:28

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Town of Cochrane - Wastewater

Work Order Number: 497512

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations. Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

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ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method.

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.



Date Order Received: 5/3/2023 Arrival Temperature: 17 °C	Email: michael.nels	Phone: (705) 272-9093	Cochrane, ON, P0L 1C0	Address: 171 Fourth Ave, Box 490	Company: Town of Coc	Client: Michael Nelson
	michael.nelson@cochraneontario.com	93	N, POL 1CO	ve, Box 490	Town of Cochrane - Wastewater	Ω Ω
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
5/3/2023 5/10/2023	Andy Crickard		Overflow	Information not provided	11885	497707

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1875482	Wastewater	Grab		5/2/2023	3:00 PM
Sewage Plant Overflow	1875483	Wastewater	Grab		5/2/2023	11:00 PM
Sewage Plant Overflow	1875484	Wastewater	Grab		5/3/2023	7:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2.
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Date of Issue: 05/11/2023 11:48



Work Order Number: 497707

This report has been approved by:

Town of Cochrane - Wastewater

Adam Tam, M.Sc. Laboratory Director



Work Order Number: 497707

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	5/2/2023 3:00 PM	3:00 PM	5/2/2023 11:00 PM	1:00 PM	5/3/2023 7:00 AM	:00 AM	
Lab ID	1875482	482	1875483	183	1875484	184	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	1.72	0.05	0.07	0.05	1.84	0.05	mg/L
Nitrite (as N)	0.74	0.05	0.59	0.05	0.31	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	5/2/2023 3:00 PM	3:00 PM	5/2/2023 11:00 PM	1:00 PM	5/3/2023 7:00 AM	:00 AM	
Lab ID	1875482	482	1875483	183	1875484	184	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	2.78	0.01	1.98	0.01	2.82	0.01	mg/L
pH	7.35	N/A	7.17	N/A	7.55	N/A	рН
Total Kjeldahl Nitrogen	6.2	0.4	8.4	0.4	11.7	0.4	mg/L
Total Phosphorus (as P)	0.658	0.002	0.847	0.002	1.150	0.006	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	5/2/2023 3:00 PM	3:00 PM	5/2/2023 11:00 PM	1:00 PM	5/3/2023 7:00 AM	:00 AM	
Lab ID	1875482	482	1875483	183	1875484	184	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	2940000	10000	2610000	10000	5030000	10000	CFU/100mL

Date of Issue: 05/11/2023 11:48

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Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 497707

Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	Int Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/2/2023 3:00 PM	3:00 PM	5/2/2023 11:00 PM	11:00 PM	5/3/2023 7:00 AM	7:00 AM	
Lab ID	1875482	5482	1875483	5483	1875484	484	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	22	6	39	6	20	6	mg/L
Carbonaceous BOD	14	6	38	6	19	σ	mg/L
Sample Description	Sewage Plant Oventow	nt Overflow	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/2/2023 3:00 PM	3:00 PM	5/2/2023 11:00 PM	11:00 PM	5/3/2023 7:00 AM	7:00 AM	
Lab ID	1875482	5482	1875483	5483	1875484	484	

Sample Date	01212020 0.00 T IN	0.001 19	01212020				
Lab ID	1875	1875482	187	1875483	1875484	5484	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	36.0	1.3	54.0	1.3	40	1	mg/L

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

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ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer. Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

SON WATER PLANT ROOD 120000355

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: AUGUST 2/23 Time of Call: 5:55 a.m./p.m
Reference # 1- 3P96QH Person Who Called: Speed ALCOCK.
Office Called: SAC / MGHO5:56 Reported By: DILLON.
Bypass: Spill: Leak: Overflow:
Location of Incident: WASTER PLANT
Time of Incident: 5: 30 a.m./ Receiver: LILLABELLE CREEK
Details of Incident:
Downstream Users: NONE
Possible Effects on Receiver, Environment or Downstream Users: None
 NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 1. 5-day BOD and CBOD, Suspended Solids, pH, TKN and Total phosphorus Addition Calls Town Hall: Phone No. 272-4361 Fax No. 272-6068 Time of Call:
Details of Call: LEFT VOICEMAIL WITH MOH
Termination of Incident
Date: Aur 3/23 Time of Call: 0955 Person Contacted: NEIL
Time of Termination: 9:36 Pm Approximate Volume: 312,76 Cu. Meters
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required: NONE
Reported By: DARE ALCOM

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Date Order Received: 8/3/2023 Arrival Temperature: 9 °C Analysis	Melissa.Hoogenhoud@cochraneontario.com	Phone: DWS #:	Cochrane, ON, P0L 1C0 Project :	Address: 171 Fourth Ave, Box 490 Regulati	Company: Town of Cochrane - Wastewater PO #:	Client: Melissa Hoogenhoud Work Ol
	neontario.com				er	
Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Project #:	Regulation:	PO #:	Work Order Number:
8/4/2023 8/11/2023	Jared Alcock		Overflow	Information not provided	11959	508247

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow Sample #1	1912587	Wastewater	Grab		8/2/2023	6.07 PM
Sewage Plant Overflow Sample #2	1912588	Wastewater	Grab		8/2/2023	9:58 PM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E, coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water:	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Committed to Quality and Service **TESTMARK** Laboratories Ltd.

CERTIFICATE OF ANALYSIS

Work Order Number: 508247

Town of Cochrane - Wastewater

This report has been approved by:

Laboratory Director Adam Tam, M.Sc.

WORK ORDER RESULTS

Lab ID	Sample Date	Sample Description	Nitrite (as N)	Nitrate (as N)	Anions	Lab ID	Sample Date	Sample Description
191;	8/2/2023	Sewage Plant Ov	<0.05	0.53	Result	191	8/2/2023	Sewage Plant Ov
1912587	8/2/2023 6:07 PM	rentiow Sample #1	0.05	0.05	MDL	1912587	8/2/2023 6:07 PM	rentiow Sample #1
1912588	8/2/2023 9-58 PM	Sewage Plant Overflow Sample #1 Sewage Plant Overflow Sample #2	<0.05	<0.05	Result	1912588	8/2/2023 9:58 PM	Sewage Plant Overflow Sample #1 Sewage Plant Overflow Sample #2
2588	9.58 PM	enflow Sample #2	0.05	0 05	MDL	588	9:58 PM	arflow Sample #2
			mg/L	mg/L	Units			

Sample Description	12.00				
Sample Date	8/2/2023	8/2/2023 6:07 PM	8/2/2023 9-58 PM	9-58 PM	
Lab ID	1912	1912587	1912588	2588	
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	2,67	0.01	16.1	0_1	mg/L
рн	7_14	N/A	7.41	N/A	pН
Total Kjeldahl Nitrogen	15.1	0.4	33.8	0,4	mg/L
Total Phosphorus (as P)	0.934	0.002	2 22	0.02	mg/L

Date of Issue: 08/11/2023 16:29

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CERTIFICATE OF ANALYSIS

Town of Cochrane - Wastewater

Sample Description Sample Date	Sewage Plant Overflow Sa 8/2/2023 6:07 PM	entow Sample #1 6:07 PM	Sewage Plant Overflow Sample #1 Sewage Plant Overflow Sample #2 8/2/2023 6:07 PM 8/2/2023 9:58 PM	erflow Semple #2 9 58 PM	
Lab ID	1912587	2587	1912588	588	
Microbiology	Result	MDL	Result	MDL	Units
Escherichia coli	610000	10000	1940000 [1690000]	10000	CFU/100mL
Sample Description	Sewage Plant Ov	enflow Sample #1	Sewage Plant Overflow Sample #1 Sewage Plant Overflow Sample #2	orflow Sample #2	
Sample Date	8/2/2023 6:07 PM	6:07 PM	8/2/2023 9-58 PM	9.58 PM	
Lab ID	1912587	2587	1912588	588	
Oxygen Demand	Result	MDL	Result	MOL	Units
BOD (5 day)	39	ß	80.9 [79]	6	mg/L
Carbonaceous BOD	24	Ø	71 2 [77 3]	Ø	mg/L
Sample Description	Sewage Plant Ov	entow Sample #1	Sewage Plant Overflow Sample #1 Sewage Plant Overflow Sample #2	erflow Sample #2	
Sample Date	8/2/2023 6:07 PM	6.07 PM	8/2/2023 9:58 PM	9:58 PM	
Lab ID	1912587	2587	1912588	.588	
Solids	Result	MDL	Result	MDL	Units

Date of Issue 08/11/2023 16-29

Total Suspended Solids

110

4

130

4

mg/L

Work Order Number: 508247



Work Order Number: 508247

LEGEND

Town of Cochrane - Wastewater

Dates: Dates are formatted as mm/dd/year throughout this report:

MDL: Method detection timit or minimum reporting limit.

[]: Results for taboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison

Organic Soil Analysis: Data reported for organic analysis in soils samples are corrected for moisture content.

Quality Control: All associated Quality Control data is available on request.

Field Data. Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received

Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

SEWAGE PLANT/LIFT STATION(S) OVERFLOW BYPASS, SPILL, OR LEAK REPORTING ID # 120000355

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: // Aug 2023 Time of Call: 7.'10 (a.m./p.m.
Reference #: 1-3Q4YE3 Person Who Called: Jim Phippy
Office Called: SAC/MOH Reported By: Jim Phipper Anastozia
Bypass: Spill: Leak: Overflow:
Location of Incident: Waste Water Plant Plant Plant Rd
Time of Incident: 7:10 a.m./p.m. Receiver: LILabelle Creek
Details of Incident: OverFlew
120000355 Facilily #
Downstream Users: NONQ
Possible Effects on Receiver, Environment or Downstream Users: <u>Wone</u>
 NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 1. 5-day BOD and CBOD, Suspended Solids, pH, TKN and Total phosphorus Addition Calls Town Hall: Phone No. 272-4361 Fax No. 272-6068 Time of Call:
Details of Call:
Termination of Incident
Date: 11/Aug/23 Time of Call: 7:20 Person Contacted: Kaitlin Mecow MOH
Time of Termination: 7:10 Approximate Volume: 9,347 Cu. Meters
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Jum Phione

00

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Date Order Received: 8/11/2023 Arrival Temperature: 13 °C	Email: Melissa.Hoogenhoud@cochraneontario.com	Phone: (705) 272-9093	Cochrane, ON, P0L 1C0	Address: 171 Fourth Ave, Box 490	Company: Town of Cochrane - Wastewater	Client: Melissa Hoogenhoud
Analysis Started: Analysis Completed:	o.com Sampled By:	DWS #:	Project #:	Regulation:	PO 共	Work Order Number:
8/11/2023 8/28/2023	Sean McGhee		Overflow	Information not provided	11959	508984

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Source Diant Overflow 1015500 Wastewater Grah	Sample Description	Lab iD	Matrix	Type	Comments	Date Collected	Time Collecte
---	--------------------	--------	--------	------	----------	----------------	---------------

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day.	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E. coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540



Work Order Number: 508984

This report has been approved by:

Town of Cochrane - Wastewater

Laboratory Director Adam Tam, M.Sc.

WORK ORDER RESULTS

Ammonia (as N) 19.8	General Chemistry Result	Lab ID	Sample Date 8/11/	Sample Description Sewag	Nitrite (as N) <0.05	Nitrate (as N) <0.05	Anions	LabiD	Sample Date 8/11/	Sample Description Sewag	
0.1	MDL	1915509	8/11/2023 11:10 AM	Sewage Plant Overflow	0.05	0.05	MDL	1915509	8/11/2023 11:10 AM	Sewage Plant Overflow	
mg/L	Units				mg/L	ng/L	Units				

Total Phosphorus (as P) Total Kjeldahl Nitrogen

4.25 36.7 7,48

0.02 0.4

mg/L mg/L



Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 508984

Solids	Lab ID	Sample Date	Sample Description	Carbonaceous BOD	BOD (5 day)	Oxygen Demand	Lab ID	Sample Date	Sample Description	Escherichia coli	Microbiology	Lab ID	Sample Date	Sample Description	
Result	1915509	8/11/2023 11:10 AM	Sewage Plant Overflow	42	97 [120]	Result	1915509	8/11/2023 11:10 AM	Sewage Ptant Overflow	>200 [>200]	Result	1915509	8/11/2023 11:10 AM	Sewage Plant Overflow	
MDL	509	11:10 AM	nt Overflow	Ø	30	MDL	509	11:10 AM	nt Overflow	-	MDL	509	11:10 AM	nt Overflow	
Units				mg/L	mg/L	Units				CFU/100mL	Units				

Total Suspended Solids

313.0

6.7

mg/L



Work Order Number: 508984

Town of Cochrane - Wastewater

LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Organic Soil Analysis: Data reported for organic analysis in soils samples are corrected for moisture content.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method. Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

SEWAGE PLANT/LIFT STATION(S) OVERFLOW BYPASS, SPILL, OR LEAK REPORTING ID # 120000355

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: <u>June 30 / ∂</u> Time of Call: <u>6:30</u> a.m. p.m
Reference #: 1-3LCEWH Person Who Called:
Office Called: > /t C Reported By: C. vickwar Bypass: Spill: Leak: Overflow:
Location of Incident: Waste Water Treatment flunt
Time of Incident: 6:15 a.m. 6.m Receiver: 1:11 able week
Details of Incident: Over flux
Downstream Users: <u>NON2</u>
Possible Effects on Receiver, Environment or Downstream Users:
 NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 5-day BOD and CBOD, Suspended Solids, pH, TKN and Total phosphorus Addition Calls Town Hall: Phone No. 272- 4361 Fax No. 272-6068 Time of Call:
Details of Call:
Termination of Incident
Date: July 12023 Time of Call: 0928 Person Contacted:
Time of Termination: 2400 Approximate Volume: 563 53 Cu. Meters
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Michael Adson

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TESTMARK Laboratories Ltd. Committed to Quality and Service

CERTIFICATE OF ANALYSIS

Client:	Melissa Hoogenhoud W	Work Order Number:	504492
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490 Re	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0 Pr	Project #:	Overflow
Phone:	(705) 272-5067 DV	DWS #:	
Email;	houd@cochraneontario.com	Sampled By:	Andy Crickard
Date Order Received: Arrival Temperature:	7/1/2023 24 °C	Analysis Started: Analysis Completed:	7/1/2023 7/10/2023

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1899306	Wastewater	Grab		6/30/2023	6:30 PM
Sewage Plant Overflow	1899307	Wastewater	Grab		6/30/2023	12:00 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Page 2 of 4

Town of Cochrane - Wastewater

TESTMARK Laboratories Ltd. Committed to Quality and Service

This report has been approved by:

Laboratory Director Adam Tam, M.Sc.

CERTIFICATE OF ANALYSIS

Work Order Numbera 504492

Town of Cochrane - Wastewater	L				
WORK ORDER RESULTS	S				
Sample Description	Sewage Plant Overflow	tt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	6/30/2023 6:30 PM	6:30 PM	6/30/2023 12:00 AM	2:00 AM	
Lab ID	1899306	306	1899307	307	
Anions	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	<0.05	0.05	mg/L
Nitrite (as N)	<0.05	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	6/30/2023 6:30 PM	6:30 PM	6/30/2023 12:00 AM	2:00 AM	
Lab {D	1899306	306	1899307	307	
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	9.47	0.05	22.2	0.1	mg/L
PH	6.97	N/A	7.41	N/A	Hq
Total Kjeldahl Nitrogen	85.3	0.8	38.7	0.4	mg/L
Total Phosphorus (as P)	4.33	0.04	3.21	0.02	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	6/30/2023 6:30 PM	6:30 PM	6/30/2023 12:00 AM	12:00 AM	
Lab (D	1899306	306	1899307	307	
Microbiology	Result	NDL	Result	MDL	Units
Escherichia coli	1950000	10000	>2000000 [>2000000]	10000	CFU/100mL

TESTMARK Laboratories Ltd. Committed to Quality and Service

Work Order Number: 504492

TESTMARK Laboratories Ltd.	boratories	s Ltd.				
Committed to Quality and Service	y and Service	-	č		CEDTIFICATE OF ANALVSIS	
			5			
Town of Cochrane - Wastewater					VVOIR UTG	Work Order Number: 504492
Cample Description	Sewage Plant Overflow	t Overflow	Sewage Pla	Sewage Plant Overflow		
Sample Date	6/30/2023 6:30 PM	6:30 PM	6/30/2023 12:00 AM	12:00 AM		
Lab ID	1899306	306	1899	1899307		
Oxygen Demand	Result	MDL	Result	MDL	Units	
BOD (5 day)	110	30	60	g	աց/Լ	
Carbonaceous BOD	140	30	62.4	9	mg/L	
Sample Description	Sewage Plant Overflow	t Overflow	Sewage Pts	Sewage Plant Overflow		
	0000000	M0.00-9	COOLOGIA	10,00,00 10,00 AM		
Sample Date	6/30/2023 6:30 FM	0:30 FM	0/30/2023	MK 00.21		
Lab ID	1899306	306	1896	1899307		
Solids	Result	MDL	Result	MDL	Units	
Total Suspended Solids	1200	10	403.0	6.7	mg/L	
LEGEND						
Dates: Dates are formatted as mm/dd/year throughout this report. MDL - Method detection limit or minimum reporting limit.	ir throughout this eporting limit.	report.				
[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.	own in square bra	ackets immediately	y below the assoc	iated sample result fi	or ease of comparison.	
Quality Control: All associated Quality Control data is available on request. Field Data: Reports containing Field Parameters represent data that has be	ntrol data is availa meters represent	able on request. data that has beer	r collected and pr	ovided by the client.	Quality Control: All associated Quality Control data is available on request. Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.	ulations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method. Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

	SEW	AGE P	LANT/LIFT STATION(S)	
	OVERFLOW BY	YPASS,	SPILL, OR LEAK REPORTING	ID #
503	WATERPLANT	ROAD	120000355	

Spills Action Center Phone No. 1-800-268-6060 MOH Phone No. 1-800-461-1818

Date: SEPT 7/23 Time of Call: 2:06 a.m./p.m.
Reference #: 1-379KJ6 Person Who Called: SARED ALCOCK
Office Called: SAC / MOH Reported By: PETER
Bypass: Spill: Leak: Overflow:/
Location of Incident: WASTEWATER PLANT
Time of Incident: 1:42 (a.m/p.m. Receiver: LILLABELLE COEEK.
Details of Incident: OVERFLOW DUE TO RAIN EVENT.
Downstream Users: NONE
Possible Effects on Receiver, Environment or Downstream Users: NONE
NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 1. 5-day BOD and CBOD, Suspended Solids, pH, TKN and Total phosphorus Addition Calls Town Hall: Phone No. 272-4361 Fax No. 272-6068 Time of Call: Details of Call: <u>LEFT VOICEMAL</u> WITH PHO & HOG 2:13 Am
Termination of Incident
Date: SEPT 7/23 Time of Call: 0955 Person Contacted: APRON
Time of Termination: 0933 Approximate Volume: 569.87 Cu. Meters
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: JARED ALCOCK



CERTIFICATE OF ANALYSIS

Date Order Received: Arrival Temperature:	Client: Company: Address: Phone: Email:
9/7/2023 11 °C	Melissa Hoogenhoud Town of Cochrane - Wastewater 171 Fourth Ave, Box 490 Cochrane, ON, P0L 1C0 (705) 272-9093 Melissa.Hoogenhoud@cochraneontario.com
Analysis Started: Analysis Completed:	Work Order Number: PO #: Regulation: Project #: DWS #: Sampled By:
9/7/2023 9/18/2023	511797 11959 Information not provided Overflow Jared Alcock

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab iD	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow 1st Sample	1925264	Wastewater	Grab		9/7/2023	1:52 AM
Sewage Plant Overflow 2nd Sample	1925265	Wastewater	Grab		9/7/2023	9:33 AM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Timmins	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD) 5-Day	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Blochemical Oxygen Demand (CBOD) 5-Day	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E, coli in water by Membrane Filtration on mFC-BCIG media	Modified from MOE E3371
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
TKN Water Dig (A58)	Garson	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.	Modified from SM-4500 NORG-D
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water	Modified from EPA 365.3 and ESS 310.2.
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540

Date of Issue: 09/18/2023 16:08



CERTIFICATE OF ANALYSIS

Work Order Number: 511797

Town of Cochrane - Wastewater

This report has been approved by

WORK ORDER RESULTS

	Sewage Plant Overflow 1st	Overflow 1st	Sewage Plant Overflow 2nd	Overflow 2nd	
Sample Description	aduas	and		Did.	
Sample Date	9/7/2023 1:52 AM	1.52 AM	9/7/2023 9:33 AM	9:33 AM	
Lab ID	1925264	5264	1925265	265	
Anions	Result	MDL	Result	MDF	Units
Nitrate (as N)	<0.05	0.05	<0.05	0.05	mg/L
Nitrite (as N)	<0.05	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow 1st Sample	^y ant Overflow 1st Semple	Sewage Plant Overflow 2nd Sample	Overflow 2nd ple	
Sample Date	9/7/2023 1:52 AM	1:52 AM	9/7/2023 9:33 AM	9:33 AM	
Lab ID	1925264	5264	1925265	1265	
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	7.80	0.02	18,6	0.1	mg/L
μđ	6.9	N/A	7 36	N/A	рН
Total Kjeldahl Nitrogen	37,6	0.4	41.8	0.2	mg/L
Total Phosphorus (as P)	2.81	0.02	2.24	0.02	mg/L

Date of Issue: 09/18/2023 16:08

TESTMARK Laboratories Ltd. Committed to Quality and Service

Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 511797

Carbonaceous BOD 240 30 97	BOD (5 day) 220 30 140	Oxygen Demand Result MDL Result	Lab ID 1925264 19	Sample Date 9/7/2023 1:52 AM 9/7/202	Sample Description Sewage Plant Overflow 1st	Escherichia coli [2000000] 10000 2400000	Microbiology Result MDL Result	Lab ID 1925264 19	Sample Date 9/7/2023 1:52 AM 9/7/202	Sample Description Sewage Plant Overflow 1st Sewage Plant Sample Semple	
97 30	140 30	Result MDL	1925265	9/7/2023 9-33 AM	Sewage Plant Overflow 2nd Sample	2400000 10000	Result MDL	1925265	9/7/2023 9:33 AM	Sewage Plant Overflow 2nd Sample	
30 mg/L	30 mg/L	MDL Units		Z	w 2nd	0000 CFU/100mL	MDL Units		×	w 2nd	

Date of Issue: 09/18/2023 16-08

Solids

Result 1210

10

206

ь.

Units mg/L

Total Suspended Solids

1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca

Page 3 of 4



CERTIFICATE OF ANALYSIS

Work Order Number: 511797

LEGEND

Town of Cochrane - Wastewater

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of companson

Organic Soit Analysis: Data reported for organic analysis in soils samples are corrected for moisture content.

Quality Control: All associated Quality Control data is available on request.

Field Data. Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Reproduction of Report: Report shall not be reproduced, except in fult, without the approval of Testmark Laboratories Ltd. Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

	<u>ANT/LIFT STATION(S)</u> <u>SPILL, OR LEAK REPORTING ID :</u> <u>120000355</u>	<u>#</u>
■ 0.07	ter Phone No. 1-800-268-6060 one No. 1-800-461-1818	
Date: SEPT 13/23	Time of Call: <u>11: 37</u> a.m/p.m.	
	Person Who Called: CheeD ALCOCH	<u> </u>
Called SAC at: 11537 Am	Reported by: AKIKO	
Called MOH at: 11:42	Reported by"	AKIKO
Bypass: Spill:	Leak:Overflow:	
	EFFWENT	
Time of Incident: Far, 7. 00 (.m.)p.m. R	eceiver: LILABELLE CEREL	_
	DE BLANKET (NORMAL PER TT, DISRUPTED FLOWS CAUSING	
Downstream Users: NONC		3 OVECTOU
Possible Effects on Receiver, Environment	or Downstream Users: NONE	
overflow: 1. 5-day BOD and CBOD, Suspended Addition Calls	No. 272-6068 Time of Call:	-
Termination of Incident		
Date: Sept 13/23 Time of Call: 11:37	7 M Person Contacted: AKKO	_
Time of Termination: // Of An Appro	oximate Volume:Cu. Meters	
Duration of Bypass: 4 HONRE		
	No: Explain:	
Further Action Required:	JE CAUED MOIT : LEET	Usicemail
Reported By: JOEB ALLOIK	÷	

SForm.014.Bypa.2013

Date of Issue: 09/22/2023 16 35	Ammonia Water (A42) Anions Water (mg/L by IC) (A5) BOD (A3) CBOD (A3) E. coli by MF on mFC-BCIG (A10) pH of Water (A2.0) TKN Water Dig. (A58) TP Water (A23.2) TSS (A27) This report has been approved by:	Method	METHODS AND INSTRUMENTATION THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):	Sewage Plant Overflow	Sample Description	WORK ORDER SUMMARY ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE	Date Order Received: 9/13/2023 Arrival Temperature: 12 °C		Coontai (705) 22	Address: 171 Fou	Company: Town of			Committed to Quality and Service
	Timmins Timmins Kirkland Lake Timmins Garson Kirkland Lake Timmins	Lab	MENTATION	1927808	Lab ID	Y D ON THE FOLLOWING	23	Melissa.Hoogenhoud@cochraneontario.com	(705) 272-9093	171 Fourth Ave, Box 490	Town of Cochrane - Wastewater	Melissa Hoogenhoud		boratories Ltd. y and Service
1: Phone: (705)	Determin Determin Deterr	<u>"</u>	SAMPLE(S):	Wastewater	Matrix	SAMPLES. THE		eontario.com					ê	
335 Riverside Drive, Timmir 531-1121 Fax; (705) 531-1	Determination of Anion Determination of Anion Determination of Biocher ation of Carbonaceous B ation of E. coli in water t Determination of Wat Determination of Wat Determination of Jotal Sus			Grab	Туре	RESULTS RELATE							CERTIFICATE OF ANALYSIS	
1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca	Determination of Ammonia/Ammonium In Water Determination of Anions in Water by Ion Chromatography Determination of Biochemical Oxygen Demand (BOD) 5-Day Determination of Carbonaceous Biochemical Oxygen Demand (CBOD) 5-Day Determination of E. coli in water by Membrane Filtration on mFC-BCIG media Determination of Water pH by Ion Selective Electrode Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion. Determination of Total Suspended Solids in water by gravimetry	Description			Comments	ONLY TO THE ITEMS TESTED.	Analysis Started: Analysis Completed:	Sampled By:	DWS #:	Droiget #:		Work Order Number:	ANALYSIS	
							9/13/2023 9/22/2023			Overflow	AC611	512511		
	Modified from EPA 350,1 Modified from SW846-9056A Modified from SM-5210 B Modified from SM-5210-B Modified from APHA-4500H+ B Modified from SM-4500 NORG-D Modified from EPA 365.3 and ESS 310.2, Modified from SM-2540	Reference		9/13/2023	Date Collected					ot provided				
Page 1 of 3	PA 350,1 946-9056A 1-5210-B 1-5210-B 2E E3371 V-4500H+ B 00 NORG-D and ESS 310,2, M-2540			10:44 AM	Time Collected									

Committed to Quality and Service

CERTIFICATE OF ANALYSIS

Work Order Number: 512511

WORK ORDER RESULTS

Town of Cochrane - Wastewater

WORK ORDER RESULTS	U.		
Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	9/13/2023 10:44 AM	10:44 AM	
Lab ID	1927808	808	
Anions	Result	MDL	Units
Nitrate (as N)	17.30	0.05	mg/L
Nitrite (as N)	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	9/13/2023 10:44 AM	10:44 AM	
Lab ID	1927808	808	
General Chemistry	Result	MDL	Units
Ammonia (as N)	1.95	0.01	mg/L
рН	6.91	N/A	рH
Total Kjeldahl Nitrogen	16,4	0.2	mg/L
Total Phosphorus (as P)	0.567	0.002	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	9/13/2023 10:44 AM	10:44 AM	
Lab ID	1927808	808	
Microbiology	Result	MDL	Units
Escherichia coli	3000 [4000]	1000	CFU/100mL

1335 Riverside Drive, Timmins, ON, P4R 1A6 Phone: (705) 531-1121 Fax: (705) 531-1125 Web: www.testmark.ca



Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 512511

Sample Description	Sawage Plant Overflow	int Overflow	
Sample Date	9/13/2023 10:44 AM	10:44 AM	
Lab ID	1927808	7808	
Oxygen Demand	Result	MDL	Units
BOD (5 day)	8.3	1	mg/L
Carbonaceous BOD	4,9	4	mg/L
Sample Description	Sewage Plant Overflow	int Overflow	
Sample Date	9/13/2023 10:44 AM	10:44 AM	
Lab ID	192	1927808	
Solids	Result	MDL	Units

LEGEND

Total Suspended Solids

39.00

0.67

mg/L

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL_ Method detection limit or minimum reporting limit.

[] Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

Organic Soil Analysis: Data reported for organic analysis in soils samples are corrected for moisture content.

Ouslity Control: All accorded Ouslity Control data is available on request

Quality Control; All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

Reproduction of Report, Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client. ICPMS Dustfall Insoluble. The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method

Calibration Reports

Ontario Clean Water Agency

Instrumentation Calibration/Maintenance Report

RG #					
		_Work	Order #:		
strument:	F	Portable Di	ssolved Oxygen M	Aeter	
CWA ID:		S	erial #:	16090000	3927
art Day/Time: 15 / 03 /	23 (2) 14 : (24hour clos	<u> </u>	nd Day/Tim	e: 15 / 03 / 23	@ 14 : 15
of Workers: 1			`otal Man Ho		24hour clock
Type of Work Order: Scheduled Maintenance	Corr	ective Wo	ork Order	Other:	
Instrument Type: Recorder Transmitte	er 🗌 pH (Chlori	ne 🗌 Turbid	ity 🗍 Flow [Other: DO
	e Reverse page f			·	
Input/Standard	Actual Valu	As Four	1	A Actual Value	s Left
	Actual valu	IC	% Accuracy	Actual value	% Accuracy
Material Used:	% Acc	uracy Calc	ulation => ABS(/	Actual Value/Stand	lard) –1] x 100%)
Quantity Pa	art #			Description	
1	50-0 L	61	mm of Distilled w	ater as per calibra	ition instructions
			·········		
				18. 1	
Comments:	<u></u>			· · · · · · · · · · · · · · · · · · ·	<u></u>
Shake 6mm (1/4") of wat	er in a beaker fe	or 30 sec	conds. Insert p	robe in beaker	above water. All
for probe to stabilize. Beg			•		
•	·				
Instrument Passed Calib	ration.				
In good working order.					
Name: Brenc	lon Jacksic		Signature:	Buch	Parter
Control,					

Ontario Clean Water Agency

Instrumentation Calibration/Maintenance Report

Location:		Co	chrane WWTP		aar da ah fa da ah ah da da da da da da ah
ORG #		Wo	rk Order #:		
Instrument		Spect	trophotometer DR28	00	
OCWA ID:	12		Serial #:	1230881	the same of the later
Start Day/T	ime: 15 / 03 / 23	<u>(2)</u> 13 : 45	End Day/Tim	e: 15 / 03 / 23	(a) 14 : 00 .
# of Worker	rs: <u>1</u>	24hour clock	Total Man H		24Denal Clarch
	Vork Order: Maintenance		Work Order	Other:	an ann an an a'
Recorder	Transmitter	pH Chk	_	lity 🗌 Flow 🗌	Other: Specirophotometer
Calibratio	ut/Standard	verse page for cali As Fo		٨٥	Left
mpt	it/Stanuaru	Actual Value	% Accuracy	Actual Value	% Accuracy
		100000 10000	//////////////////////////////////////		, , , , , , , , , , , , , , , , , , ,
See	back of page				
Material	Used:	% Accuracy C	alculation => ABS((Actual Value Standa	rd) –1] x 100%ö)
Quantity	Part #			Description	
1	263530		Low Range	DPD secondary st	andards
1	27639-0	00	DR chec	ck absorbency stand	dards
Comment	t s:	I			

Name:

Brendon Jacksic

Signature:____

Berk Jules

Cochrane WWTP

Spectrophotometer DR2800

Calibration:

Input/Standard	As F	ound	As	Left
	Actual Value	% Accuracy	Actual Value	% Accuracy
Wave Length 420 nm				
wave Lengin 420 mm				
0.552 +/- 0.050	0.536	97.1 %		
1.153 +/- 0.100	1.122	97.3 %		
1.761 +/- 0.150	1.749	99.3 %		
Wave Length 520 nm				
0.565 +/- 0.050	0.561	99.3 %		
1.193 +/- 0.100	1.180	98.9 %		
1.819 +/- 0.150	1.825	99.7 %		
Wave Length 560 nm				
0.568 +/- 0.050	0.560	98.6 %		
1.194 +/- 0.100	1.185	99.2 %		
1.831 +/- 0.150	1.837	99.7 %		
Wave Length 610 nm				
0.541 +/- 0.050	0.539	99.6 %		
1.141 +/- 0.100	1.143	99.8 %		
1.750 +/~ 0.150	1.770	98.9 %		
Program 80				
0.21 mg/l +/- 0.09	0.20	95.2 %		
0.86 mg/l +/- 0.10	0.86	100 %		
1.54 mg/l +/- 0.14	1.53	99.4 %		
Program 85				
0.23 mg/l +/- 0.09	0.21	91.3 %		
0.95 mg/l +/- 0.10	0.93	97.9 %		
1.69 mg/l +/- 0.14	1.68	99.4 %		

Ontario Clean Water Agency

Instrumentation Calibration/Maintenance Report

location:	Cochrane STP					
DRG #		W	/ork	Order #:		
nstrument		Sp	ectrop	hotometer DR39	00	
DCWA ID:			S	erial #:	1415128	3
Start Day/T f of Worker	'ime: 15 / 03 / 23 DD MM YY rs: 1	(a) 13:30 End Day/Time: 15 / 03 / 23 DD MM YY 24hour clock Total Man Hours: 1/4			(a) 13 : 45 . 24hour cleck	
	Vork Order: 1 Maintenance	Correctiv	/e Wo	ork Order	Other:	
Instrume Recorder	nt Type:	□рн □С	hlorii	ne 🗌 Turbid	ity []Flow [Other: Spectrophotometer
Calibrati		verse page for c				T C
Inpu	Input/Standard		Foun	M Accuracy	Actual Value	s Left % Accuracy
		Actual Value		70 Accuracy	Actual value	70 Accuracy
See	back of page					
				· · · · · · · · · · · · · · · · · · · ·		
Material	Used:	% Accuracy	/ Calcı	alation > ABS(/	Actual Value Standa	urd) –1] x 100%)
Quantity	Part #				Description	
1	263530	00	Low Range DPD secondary standards			
1	27639-	DO	DR check absorbency standards			
					<u></u> ,	
Comment	te •					
		·····				<u></u>
		· · · ·				

Name: Brendon Jacksic

Signature: Buch Jacken

Cochrane STP

Spectrophotometer DR3900

Calibration:

Input/Standard	As F	ound	As	Left
	Actual Value	% Accuracy	Actual Value	% Accurac
Wave Length 420 nm				
Wave Length 420 mm			· · · · · · · · · · · · · · · · · · ·	
0.552 +/- 0.050	0.539	99.66%		
1.153 +/- 0.100	1.127	99.26%		
1.761 +/- 0.150	1.755	99.40%		
Wave Length 520 nm				
0.565 +/- 0.050	0.567	99.65%		
1.193 +/- 0.100	1,190	99.16%		
1.819 +/- 0.150	1.838	98.88%		
			*	
Wave Length 560 nm				
0.568 +/- 0.050	0.568	98.65%	· · · · · · · · · · · · · · · · · · ·	
1.194 +/- 0.100	1.197	98.74%		
1.831 +/- 0.150	1.848	99.72%		
Wave Length 610 nm				
0.541 +/- 0.050	0.541	99.11%		
1.141 +/- 0.100	1.139	99.39%		
1.750 +/- 0.150	1.761	99.47%		
Program 80				
0.71 meltal 0.00	0.20	95.2 %		
0.21 mg/l +/- 0.09 0.86 mg/l +/- 0.10	0.20	100 %		
1.54 mg/l +/- 0.14	1.56	98.8 %		
Program 85				
0.23 mg/l +/- 0.09	0.22	95.7 %		
0.95 mg/l +/- 0.10	0.94	98.9 %		
1.69 mg/l +/- 0.14	1.70	99.4 %		
· · · · · · · · · · · · · · · · · · ·				
<u> </u>				



Instrumentation Calibration/Maintenance Report

location:	Cochrane WWTP						
DRG #			_Work	Order #:			
nstrument:		Pc	ortable Di	ssolved Oxygen	Meter		
DCWA ID:			S	erial #:	16090000	3927	
tart Day/Time: 20 DI of Workers:	24hour clock		nd Day/Tim otal Man H	ne: 20 / 06 / 23 (a) 13 : 45 DD/MM/YY 24hour clock			
Type of Work O ✓ Scheduled Mainter Instrument Type □ Recorder □ Training	rder: nance e: ansmitter	рH	ctive Wo	ork Order ne	Other:_	Other: DO	
Calibration:		verse page fo					
Input/Standard		Actual Value	As Foun	d % Accuracy	Actual Value	s Left % Accuracy	
		Actual value	,	70 Accuracy	Actual value	70 Accuracy	
		<u> </u>					
Material Used:		% Accur	racy Calcu	lation => ABS([(Actual Value/Stand	lard) –1] x 100%)	
Quantity	Part #			Description			
1			6r	nm of Distilled v	ater as per calibra	ation instructions	
Comments: Shake 6mm (1/4")	of water in	n a beaker fo				above water. Allo	
for probe to stabili	ze. Begin o	alibration.					

Instrument Passed Calibration.

Warning present, new LDO cap required as per warning message and unit manual.

Name:

Brendon Jacksic

Signature: Buch Juli



Instrument Information		Client Information		Quality Management Information	
Instrument Type	Open Channel Flowmeter	Location	Cochrane STP	Allowable Error (%)	15
Manufacturer	Siemens	ORG #	1109	Calibration Frequency	Anually
Model	LUT-440	Work Order #	3290339	Reference Meter Used	
Serial Number	PBD E4170039	Type of Work Order	Scheduled	Manufacturer	n/a
DCWA ID	n a	Calibration Date (DD MM YY)	28 09 23	Model	n a
Instrument Tag	n/a	Start Time 1246 Clock	10-30	Serial	n/a
Process Location	Fast Flow	End Time (24hr clock)	10.45	OCWA ID	n/a

Level Meter Verification

As Found				
Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	%	FAIL
1	0.042	0.045	7.14	PASS
2	0.042	0.045	7.14	PASS
3	0.042	0.045	7,14	PASS
			Overall Result	PASS

As Left				
Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	9/0	FAIL
			N/A	N/A
			N/A	N/A
			N/A	NA
			Overall Result	N/A

Verification Information Level Units m

Overall Calibration Result

PASS

Level Officia	111
Reference Method	Measuring Tape (Visual)
Adjustments Made?	No
Empty Distance	n'a m
Full Scale	n'a m

Verification Notes

Head level at weir plate measured and compared to flowmeter head level reading

Technician Name - Brendon Jacksic

Technician Signature - Burl Judur



Overall Calibration Result

Rev. 01.03(24/23)

PASS

m

No

n'a m

n a m

Instrument Information		Client Information		Quality Management Information	
nstrument Type	Open Channel Flowmeter	Location	Cochrane STP	Allowable Error (%)	15
Manufacturer	Hach	ORG #	1109	Calibration Frequency	Anually
Model	OCM	Work Order #	3290339	Reference Meter Used	
Serial Number	120859005177	Type of Work Order	Scheduled	Manufacturer	n/a
DCWA ID	n/a	Calibration Date (DD MM YY)	28 09 23	Model	nia
nstrument Tag	n a	Start Time (24br Clock)	10 30	Serial	n/a
Process Location	West Flow	End Time (Marcled)	10.45	OCWA ID	n/a

Level Meter Verification

As Found				
Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	%	FAIL
1	0.041	0_040	2.44	PASS
2	0.041	0.040	2.44	PASS
3	0.041	0.040	2.44	PASS
			Overall Result	PASS

As Left

183 84646				
Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	%	FAIL
			N/A	N/A
			N/A	N/A
			N/A	N A
			Overall Result	N/A

Reference Method Measuring Tape (Visual) Adjustments Made? Empty Distance Full Scale

Level Units

Verification Information

Verification Notes

Head level at weir plate measured and compared to flowmeter head level reading Sensor replace warning. Recommend replacing sensor or upgrading unit.

Technician Name - Brendon Jacksic





Rev. 91.032423

PASS

m

Instrument Information		Client Information		Quality Management Information	
Instrument Type	Open Channel Flowmeter	Location	Cochrane STP	Allowable Error (%)	15
Manufacturer	Hach	ORG #	1109	Calibration Frequency	Anually
Model	OCM	Work Order #	3290339	Reference Meter Used	
Serial Number	120859005176	Type of Work Order	Scheduled	Manufacturer	n/a
OCWA ID	n a	Calibration Date (DD MM YY)	28 09 23	Model	n a
Instrument Tag	n a	Start Time (24hr Clock)	11.00	Serial	n a
Process Location	Contact Flow	End Time (246 clock)	11.15	OCWA ID	n a

Level Meter Verification

As Found				
Test	Reference Meter m	Meter Reading	Error %	PASS FAIL
1	0.164	0.160	2.44	PASS
2	0.164	0.160	2.44	PASS
3	0 164	0.160	2.44	PASS
			Overall Result	PASS

As Left

Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	%	FAIL
			N/A	N/A
			N/A	N/A
			N/A	NA
	-	-	Overall Result	N/A

Verification Information Level Units

Reference Method	Measuring Tape (Visual)
Adjustments Made?	No
Empty Distance	n a m
Full Scale	n'a m

Overall Calibration Result

Verification Notes

Head level at weir plate measured and compared to flowmeter head level reading Sensor replace warning. Recommend replacing sensor or upgrading unit

Technician Name - Brendon Jacksic

Technician Signature - Buch Jun



Overall Calibration Result

Measuring Tape (Visual)

Rev 01, 012421

PASS

m

Yes n'a m n'a m

Instrument Information		Client Information	Client Information		Quality Management Information	
Instrument Type	Open Channel Flowmeter	Location	Cochrane STP	Allowable Error (%)	15	
Manufacturer	Hach	ORG #	1109	Calibration Frequency	Anually	
Model	OCM	Work Order #	3290339	Reference Meter Used		
Serial Number	120859005176	Type of Work Order	Scheduled	Manufacturer	n a	
OCWA ID	n/a	Calibration Date (DD MM YY)	28 09 23	Model	n a	
Instrument Tag	n/a	Start Time (24br Clock)	11:15	Serial	n/a	
Process Location	Bypass Flow	End Time (24br Clock)	11:30	OCWA ID	n a	

Level Meter Verification

As Found				
Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	%	FAIL
1	0.620	0.072	88.39	FAIL
2	0.620	0.072	88.39	FAIL
3	0.620	0,072	88.39	FAIL
			Overall Result	FAIL

As Left

Test	Reference Meter	Meter Reading	Error	PASS
#	m	m	0/0	FAIL
1	0.620	0.620	0.00	PASS
2	0.620	0.620	0.00	PASS
3	0.620	0.620	0.00	PASS
			Overall Result	PASS

AIL_	Adjustments Made?
AIL.	Empty Distance
AIL	Full Scale

Verification Information

Level Units

Reference Method

Verification Notes

Head level at weir plate measured and compared to flowmeter head level reading Sensor replace warning. Recommend replacing sensor or upgrading unit

Technician Name -Brendon Jacksic Technician Signature - Burl Judan

Ontario Clean Water Agency Agence Ontarienne Des Eaux

Instrumentation Calibration/Maintenance Report

Location:			Cochr	ane WWTP		
ORG #			Work	Order #:		
Instrument:		Por	table Di	ssolved Oxygen	Vieter	
OCWA ID:			S	erial #:	160900003	3927
	DD/MM/YY	(a) 11 : 30 24hour clock				
_			I	otai ivian m	Juis: 04	_
		Correct	tive Wo	ork Order	Other:	
Recorder	Transmitter			—	ity 🗌 Flow 🔽	Other: DO
					A	s Left
		Actual Value		% Accuracy	Actual Value	% Accuracy
# of Workers: 1 Total Man Hours: 1/4 Type of Work Order:						
Material Used	1:	% Accura	acy Calci	lation => ABS(/	 [(Actual Value/Stand	lard) –1] x 100%)
Quantity	Part #	<i>‡</i>			Description	
1			6r	mm of Distilled w	/ater as per calibra	ation instructions

Comments:

Shake 6mm (1/4") of water in a beaker for 30 seconds. Insert probe in beaker above water. Allow for probe to stabilize. Begin calibration.

Instrument Passed Calibration.

In good working order.

Name:

Brendon Jacksic

Signature: Buch Jacken



Overall Calibration Result

Calibration Information Calibration Performed?

Slope Value Offset

Rev. 00, 04/17/23

PASS

Yes n/a mV/pH

n/a mV

Instrument Information		Client Information	Client Information		Quality Management Information	
Instrument Type	pH Analyzer	Location	Cochrane STP	pH Buffer Stock		
Manufacturer	Hach	ORG #	1109	Buffer Lot#	A2151	
Model	SenSION 3+	Work Order #	3290339	Buffer Expiry	Aug. 25	
Serial Number	615107	Type of Work Order	Scheduled	Allowable Error (%)	4	
OCWA ID	n/a	Calibration Date (DD MM YY)	21/12/23	Calibration Frequency	Quarterly	
Instrument Tag	n/a	Start Time (24hr Clock)	11.00			
		End Time (24br Clock)	11 15			

pH Calibration

As Found				
Buffer	As Found	As Found Temp	Error	PASS
Dutter	рН	°C	%	FAIL
4.00	4.070	n/a	1.75	PASS
7,00	7.220	n/a	3.14	PASS
10.00	10.220	n/a	2.20	PASS
			Overall Result	PASS

As Left

Buffer	As Found	As Found Temp	Error	PASS
Duitei	pН	°C	%	FAIL
4,00	4.000	n/a	0.00	PASS
7,00	7.090	n/a	1.29	PASS
10.00	10.040	n/a	0.40	PASS
			Overall Result	PASS

Calibration Notes

Technician Name -

Brendon Jacksic

Technician Signature -

Berk Juden



Res 00,04/17/21

Instrument Information		Client Information		Quality Management Information	
Instrument Type	pH Analyzer	Location	Cochrane STP	Calibration Frequency	Quarterly
Manufacturer	Hach	ORG #	1109		
Model	SenSION 3+	Work Order #	3290339		
Serial Number	615107	Type of Work Order	Scheduled		
OCWA ID	n/a	Calibration Date (DD MM YY)	21/12/23		
Instrument Tag	n/a	Start Time (24hr Clock)	11:15		
-		End Time (24br Clock)	11:30		

Portable DO Calibration

Procedure (As per unit manual):

1 - Fill a BOD bottle 1/4 with water, stopper and shake for 30s

2 - Rinse probe with DI water and dry

3 - Put probe into bottle (ensuring it's not directly in the water) and wait at least 10mins

- 4 Enter calibration menu and press read, allow to stabalize
- 5 Record and store values, display should show 100% when reading is stable

Calibration Results:

- 100 % 24 6 °C 8.18 mg/L 92.6 %Slope
- 0 mg/L Offset

Calibration Notes Unit shows replace probe warning, recommend probe be replaced

Technician Name -Brendon Jacksic

Technician Signature -

Berk Juden

PASS **Overall Calibration Result**