COCHRANE WATER / WASTE WATER SERVICES



2022 ANNUAL REPORT

Reference Index

2022 Annual Report

- A- Annual Performance Report
- **B-** Annual Summary
- **C-** Performance Assessment Reports
- D- Bypass Summary, Notification and Lab Results
- **E-** Calibration Reports

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;

FL	ows
Total Flow	699,113 cubic meters
Average Daily Flow	1,925 cubic meters
Peak Hydraulic Flow	3,666 cubic meters

RAW SEWAGE RESULTS

RAW SEWAGE	MONTHLY AVERAGE RESULTS
BOD(5)	157 mg/l
TOTAL SUSPENDED SOLIDS	224.57 mg/l
TOTAL PHOSPHORUS	4.30 mg/l
TKN (as N)	64.33 mg/l
AMMONIA & AMMONIA NITROGEN	30.26 mg/l
pH	7.45 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 RESULTS

FINAL EFFLUENT	ANNUAL AVERAGE RESULTS
BOD(5)	15.23 mg/l
TOTAL SUSPENDED SOLIDS	6.25 mg/l
TOTAL PHOSPHORUS	0.29 mg/l
TKN (as N)	17.89 mg/l
AMMONIA	0.59 mg/l
CHLORINE RESIDUAL	0.0 mg/l
NITRITE	0.08 mg/l
NITRATE	19.20 mg/l
CBOD(5)	5.58 mg/l
E.COLI	25,923 CFU/100ml
WAS pH MAINTAINED BETWEEN 6.0-9.5 @ ALL TIMES?	Yes

The total flow in 2022 was 699,113 cubic meters which represents a 27 % increase from 2021. The total flow in 2021 was 35 % of the average day flow design capacity.

The following represents removal efficiencies for the year 2022.

BOD(5)	83.94%
TOTAL SUSPENDED SOLIDS	95.99%
TOTAL PHOSPHORUS	93.46%
TKN (as N)	74.0%
AMMONIA	98.29%
AVERAGE REMOVAL EFFICIENCY	89.14%

The above represents a decrease in overall operating efficiency of 3.6 % over the year 2022.

(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 2022.

(i) 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
2018	2685 M3
2019	3504 M3
2020	3161 M3
2021	4325 M3
2022	1372 M3

The Town of Cochrane has 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 2022.

DATE	ТҮРЕ	DURATION (hours)	FLOW (m3)
			443.64
2022-04-12	Overflow	67.5	
2022-04-24		45.5	408
	Overflow		
2022-05-12		13	11
	Overflow		
2022-06-11		13	269
	Overflow		
2022-06-22		7.15	45
	Overflow		
2022-10-18		16	2650.37
	Overflow		

2022-11-05	Overflow	15.5	12260
2022-12-30	Overflow	8.25	1300

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.

(l) 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;

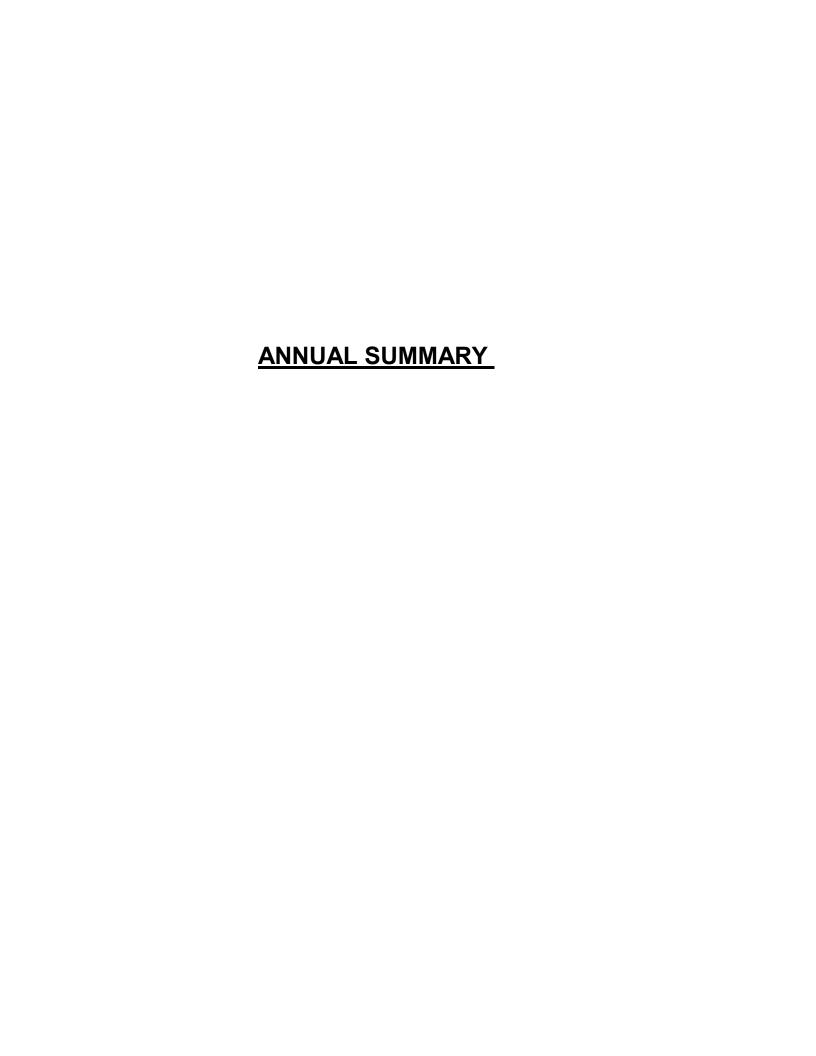
None

(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 2022. 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 Asset Coordinator



ANNUAL SUMMARY 2022

Municipality: Cochrane (PUC)

Project Name: Cochrane Water Pollution Control Plant

Project Number: **120000355**

Project Location: Cochrane, ON

						Project Loca	auon.	Cocinant	5, ON								
<u>Month</u>	<u>Parameter</u>	<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	October	November	December	<u>TOTAL</u>	AVERAGE	MAXIMUM	MINIMUM
	Total Flow	17115.36	16850.45	31484.49	119440.96	90191.39	55234.58	59942.94	46227.57	45209.84	78591.27	85917.78	52906.79	699113.42	58259.452	119440.96	16850.45
Influent	Peak Rate	901.1	1096	1912.3	6782.5	5604	4029	2987	2601	2262	5329	5875	4616	43994.9	3666.24	6782.5	901.1
Bypass	Plant-Vol.	0	0	0	851.94	11	314				2650.37	12260	1300	17387.31	1931.92	12260	0
	Time - Hrs	0	0	0	113.5	13	20.5				16	15.5	8.25	186.75	20.75	113.5	0
Raw	Susp. solids	80	144	110	98	64	533	290	313	310	640	64	48.8	2694.8	224.57	640	
	BOD	130	140	190	89	45	110	210	120	230	320	140	160	1884		320	
	TKN	130	68.2	122	41.3	16.1	45.6	8.0	25.5	48	139	87.2	48.2	771.9		139	
	Phosphorus	3.89	4.06	4.32	2.09	4.56	4.77	6.19	2.87	4.8	8.23	3.05	2.8	51.63		8.23	2.09
	Ammonia	37.7	38.6	47.9	16.2	7.99	31.7	40.8	16.3	25.1	45	32.7	23.1	363.09		47.9	
	Nitrate	0.05	0.05	0.05	0.05	0.68	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.23		0.68	0.05
	Nitrite	0.05	0.05	0.05	0.05	0.6	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.15		0.6	
	Phosphate	5.55	6.07	5.86	0.0094	1.25	9.2	11.2	2.69	2.87	14	4.53	4.83	68.0594		14	
	pH	7.19	7.54	6.97	7.45	7.7	7.43	7.82	7.61	7.52	7.65	7	7.56	89.44		7.82	6.97
	CBOD	80	140	170	5.9	40	96	210	99	170	380	130	130	1650.9	137.58	380	5.9
Effluent	Susp. solids	6	11.3	6.4	5.7	2	11.5	3.7	9	8.67	4.3	1.7	4.7	74.97		11.5	1.7
	BOD	2.4	4.2	5	150	1.6	4.5	1.4	4.6	3	1.9	1	3.2	182.8		150	
	Phosphorus	0.1246		0.2055909			0.3542632	0.4286	0.3995	0.4645789	0.415		0.2026667			0.4645789	0.1246
	Ammonia	0.1528571	0.3758824	3.9247619		0.1036842		0.385	0.4882353	0.2952632	0.1592857	0.163		7.0388483		3.9247619	
	Nitrate	34	25.8	10.8	16.2	6.35	14.1	16.7	3.08	32.3	24.2	25.1	21.8	230.43		34	3.08
	Nitrite	0.05	0.26	0.05	0.05	0.05	0.25	0.05	0.05	0.05	0.05	0.05	0.05	1.01		0.26	0.05
	TKN	12	13.8	26.1	7.4	4.3	7.9	86	16.2	3.4	12.1	17.2	8.3	214.7		86	3.4
	CBOD	1.5	3.4	46	1.4	1.6	1.3	1.1	3.8	2.1	1.6	0.9	2.2	66.9		0.651	0.002
	Phosphate	0.101	0.239	0.3	0.002	0.031	0.386	0.266	0.227	0.651	0.277	0.107	0.133	2.72		309055.5	0.002
	E.Coli	309055.5	13.75	88.4	234	76.6	65.25	1410.75	63.2	2	5	32.75	30.5	311077.7		309055.5	2
	Acute Lethality		0			0			0			0		0	0.00	0	0
Date	A: 11 1																
	Air Used	44.0545		44.0==0=0	0.000.1=0=	40.00=	44045500	45.0005	4= 00=		44.00=000	44 = 24244	10.01010=	100 01001	10.50	47.005	0.0004=0=
	Influent Temp	11.6545	11.5		9.8894737	12.665	14.915789		17.005	15.711111	14.805882		12.642105				9.8894737
	Influent pH		7.9210526	7.94	7.5294737	7.527	7.5715789	7.4215	7.1452381	7.6083333	7.63		7.9126316			10.7195	7.0044444
	Aeration Temp.	7.2611111			9.2722222	12.938889		17.833333	18.65	17.0875	14.8375		10.112778				7.2611111
	30 Min. S.S.	37.5 4.5731579	48.66667 4.52375	53.710526	37.27778 4.8244444	38.777778		43.176471	68.35 3.425	60.466667 4.1252941			72.833333 5.4161111			72.833333 5.9305263	
	D.O. % Level	6.4447368	6.6582353				6.8875	3.4647368 6.8968421	6.567	6.8275	7.121875		7.2927778			7.3168421	
	Effluent pH	7.58		9.8318182		12.925	17.036842	17.925	18.495455	17.077778	14.982353		10.421053			18.495455	7.58
	Effluent Temp	7.30	7.9042103	9.0310102	9.4376947	12.925	17.030042	17.925	10.490400	17.077776	14.902333	12.95	10.421055	130.0074	13.00	10.490400	7.56
Plant	Wasting Vol. m3	22549.76	23175.34	40660.05	145140.69	99097.88	61427.149	60691.58	51852.79	49273.78	82420.75	88906.78	46354.1	771550.65		0	0
	Chlorine (Kg)													0			
	Cl Dosage (mg/l)				_									0		0	0
	Cl Residual(mg/l)	0	0.000325	0	0	0.0000	0	0	0.005	0.0000625	0.0286667	0	0.005	0.0390542		0.0286667	0
	Cl2 in Creek													0	#DIV/0!	0	0
Grit	Hauled (Volume)													0	0.00	0	0
Sludge Haule	d Liquid Volume	153.68772		327.81666	269.52131				261		136.2748		223.33929	1371.6398			
l oadina ma/l	I Phosphorus	0.0697027	0.1070574	0.200004	0.6217700	0.4041645	0.6522526	0.0007505	0.5057202	0.7779089	1.0521089	1.0722004	0.3450053	6 0265402	0.5697117	1.0722004	0.0697027
Loaumy mg/L	L Phosphorus BOD	_	2.5275675			4.6550395		2.7071005			4.8168843				53.900662		1.3250601
	Suspended Solids	3.3120503	6.8003602	0.5000237	22.093/82	J.818/994	21.1/3256	1.1544799	13.420907	14.517382	10.90137	4.0000/42	0.021352	125.18304	10.43192	22.093/82	<u> ა.ა i20503</u>

PERFORMANCE ASSESSMENT REPORTS

							SEWAGE P	ERFORMAN	NCE ASSES	SMENT REF	PORT								
MINICIDAL	ITV:	TOWN OF	COCHBANE						YEAR:			2022							
MUNICIPAL PROJECT:		Cochrane \	COCHRANE						YEAR: WATER CO	IIDQE:		2022	ako / Abitibi	Divor					
									+			Lillabelle Lake / Abitibi River 5,600 cu. Meters / day							
PROJECT N	IUM.:	No. 120003	55						DESIGN CA	APACIIY:		5,600 Cu. IV	leters / day						
DESCRIPTION	ON:	Extended A	Aeration																
						***************************************				***************************************				***************************************					
MONTH		FLOWS	1		1ICAL O2 DE		1		ENDED SOL				HOSPHORUS			DISINFE			AUSTIC
	TOTAL	AVG DAY	MAX DAY	AVG RAW		LOADING			AVG EFF	LOADING		AVG RAW		LOADING	PERCENT	AVG	KG.S	AVG	KG.S
	FLOW	FLOW	FLOW	BOD	BOD	BOD	REMOVAL	SS	SS	SS	REMOVAL		PHOS.	PHOS.	REMOVAL		USED	DOSE	USED
IANI	1000M3 17.15	1000M3 0.552	1000M3 0.900	(mg/L) 130.0	(mg/L) 2.40	(mg/L)	98.2	(mg/L) 80.0	(mg/L) 6.00	(mg/L) 3.31	92.5	(mg/L) 3.9	(mg/L) 0.12	(mg/L)	96.8	(mg/L) 0.0000		(mg/L)	
JAN FEB	16.85	0.602	1.090	140.0		1.32 2.53		144.0					0.12	0.07 0.11	95.6	0.0003			
MAR	31.48	1.016		190.0		5.08		110.0	6.40				-	0.11	95.0	0.0000			
APR	11.94	3.981	6.783	89.0		597.15		98.0						0.63	92.4	0.0000			
MAY	90.19	2.909	5.604	45.0		4.65		64.0						0.49	96.3	0.0000			
JUN	55.23	1.841	4.029	110.0		8.28		533.0		21.17			0.00	0.00	100.0	0.0000			
JUL	59.94	1.934	2.987	210.0		2.71		290.0	3.70	7.16	98.7	6.2	0.43	0.83	93.1	0.0000			
AUG	46.22	1.491	2.601	120.0	4.60	6.86	96.2	313.0	9.00	13.42	97.1	2.9	0.40	0.60	86.1	0.0050			
SEP	45.21	1.674	2.262	230.0	3.00	5.02	98.7	310.0	8.67	14.51	97.2	4.8	0.46	0.77	90.4	0.0006			
OCT	78.59	2.535	5.329	320.0		4.82		640.0	4.30				 	1.06	94.9	0.0287			
NOV	85.91	2.864	5.875	140.0		2.86		64.0						1.06	87.9	0.0000			
DEC	52.91	1.707	4.616	160.0	3.20	5.46	98.0	48.8		8.02			0.20	0.34	92.9	0.0050			
TOTAL	591.620	4 000		457.0	45.00		00.04	67.7			100.0		0.00		00.40	0.0000	#DIV//01	#DIV ((0)	#DIV//OI
AVG MAX		1.926	6.783	157.0 100.0			83.94	145.0 6.0			95.99	4.3 8.2	 		93.46	0.0033 0.0287	#DIV/0!	#DIV/0! 0.0	#DIV/0!
CRITERIA		5.600		100.0	20.00	230.00		4.0				0.2	0.46 1.00			0.0267	0.00	0.0	0.00
AUTEROX		0.000	11.000		20.00	200.00		4.4	20.00	200.00			1.00						
COMPLIANO	CE	YES			YES				YES				YES						
LINTER SERVICE																			
COMMENTS	S:																		
									ļ										

				SEWAG	E PERFOR	MANCE ASS	ESSMENT I	REPORT					
MUNICIPAL	LITY:	TOWN OF	COCHRANE					YEAR:		2022			
PROJECT:		COCHRAN	E WPCP					WATER CO	URSE:	LILLABELLE	LAKE / ABITIBI RIVE	R	
WORKS NU	JMBER:	12000355						DESIGN CA	PACITY:	5,600 cu. me	ters/day		
DESCRIPTI	ION:	Extended	Aeration										
MONTH													
	NITRATE	NITRATE	NITRITE	NITRITE	AMMONIA	AMMONIA	PERCENT	TKN	TKN	PERCENT	PHOSPHATE	PHOSPHATE	PERCENT
	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT	REMOVAL	INFLUENT	EFFLUENT	REMOVAL	RAW ¹	EFFLUENT ²	REMOVAL
	(mg/l)	(mg/l)	(mg/l)	(mg/L)	(mg/L)	(mg/l)		(mg/L)	(mg/l)		(mg/L)	(mg/l)	
JAN	0.05	34.00	0.05	0.05		0.15	99.59	130.00	12.00		5.55	0.10	98.18
FEB	0.05	25.80	0.05	0.26		0.38	99.03		13.80	79.77	6.07	0.24	96.06
MAR	0.05	10.80	0.05	0.05		3.92	91.81	122.00	26.10	78.61	5.86	0.30	
APR	0.05		0.05		16.20	0.11	99.30		7.30		0.09	0.00	97.87
MAY	0.68			0.05		0.10	98.75		4.30		1.25	0.03	97.52
JUN	0.05						97.93		0.25		9.20	0.39	
JUL	0.05				40.80		99.06		86.00		11.20	0.27	97.63
AUG	0.05						97.01	25.50	16.20		2.69	0.23	
SEPT	0.05				25.10		98.82		3.40		2.87	0.65	
OCT	0.05						99.65		12.10		14.00	0.28	98.02
NOV	0.05						99.50		17.20		4.53	0.11	97.64
DEC	0.05	21.80	0.05	0.05	23.10	0.22	99.05	48.20	8.30	82.78	4.83	0.13	97.25
TOTAL	0.40	40.00		4.04	00.00	0.50	00.00	04.00	47.05	7400	F 00	0.00	04.00
AVG	0.10	18.09		1.24	30.26	0.59	98.29	64.33	17.25	74.00	5.68	0.23	94.98
MAX CRITERIA													
							ı						
COMMENT	S:												

BYPASS SUMMARY NOTIFICATION AND LAB RESULTS

1															
FACILITY NAM	E:	Cochrane Waste W	ater Treatme	nt Plant			YEAR:	2022							
DATE:											Sample Results				
Date	Location	Type (PB/SB/STPO	Start Time	Duration	Volume	M/E	Disinfection	Treatment	Reason	BOD5	SS	TP	E.Coli		
(yy/mm/dd)		/CSO/SSO/STWO)		(hours)	(m3)		(Y/N)	(Y/N)	Code*	(mg/L)	(mg/L)	(mg/L)	(/100ml)		
2022-04-12	STP	STPO	19:13	67.5	443.64	E	N	N	2	25.32	87.53	0.876	3510000		
2022-04-24	STP	STPO	17:05	45.5	408	Е	N	N	2	26.5	76.21429	0.733429	2014286		
2022-05-12	STP	STPO	9:57	13	11	Е	N	N	1	106.3	600.3	2.281667	3666667		
2022-06-11	STP	STPO	18:48	13	269	Е	N	N	1	77.46	172.6667	2.203333	5866667		
2022-06-22	STP	STPO	15:45	7.15	45	Е	N	N	1	274.5	625	4.185	3600000		
2022-10-18	STP	STPO	14:35	16	2650.37	Е	N	N	1	38	121.1	1.392	534966		
2022-11-05	STP	STPO	14:55	15.5	12260	Е	N	N	1	29.66667	97.13333	0.767	1889000		
2022-12-30	STP	STPO	12:50	8.25	1300	E	N	N	1	155	4101	2.025	4400000		
Legend															
PB = Primary By SB = Secondary STPO = Sewage CSO = Combine SSO = Sanitary STWO = Satellit Comments:	Bypass Treatment Pled Sewer Over Sewer Overflo	flow ow	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 (8 = Unknow 9 = Other, p	Outages	nent below.			

503 Woter Plant

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: $\frac{12}{2^2}$ Time of Call: $\frac{7 \cdot 13}{3}$ a.m. $\frac{1}{12}$ a.m. $\frac{1}{12}$
ECO	SAC Reference #: 1-1RDITR Person Who Called: Wing Crow Mind
	Called SAC at: 7,19pm Reported By: Verming Welse
	Called MOH at: 7:30 pm Reported By" Trish (Answering Service)
	Bypass: Spill: Leak: Overflow:
	Location of Incident: Cexhrone STP Time of Incident: 5:30 a.m./p.m. Receiver: Wahelle Creek.
	Time of Incident: 5:30 a.m./p.m. Receiver: Wabelle Creek.
	Details of Incident: 3p/19 - Howw
	Downstream Users: Now 15
	Possible Effects on Receiver, Environment or Downstream Users:
	NOTE: Take 3 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: April 15 2022 Time of Call: 14:40 Person Contacted: Jon kow pa
	Time of Termination: 14.30 Approximate Volume: 443.64 Cu. Meters
	Duration of Bypass: 67.5 Krs
	Current Status: Chlorinating? Yes: No: Explain:
	Further Action Required: Novaya
	Reported By:SForm.014.Bypa.2013



Client:	Lynn Chapleau	Work Order Number: 459843	459843
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-5067 / (705) 272-2634	DWS #:	
Email:	lynn.chapleau@cochraneontario.com	Sampled By:	Benoit Parent
Date Order Received: Arrival Temperature:	4/13/2022 14 °C	Analysis Started: Analysis Completed:	4/13/2022 4/20/2022

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	1743770	Wastewater	Grab		4/12/2022	7:12 PM
Sewage Plant Overflow	1743771	Wastewater	Grab		4/13/2022	1:30 AM
Sewage Plant Overflow	1743772	Wastewater	Grab		4/13/2022	7:30 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



Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

CERTIFICATE OF ANALYSIS

Work Order Number: 459843

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



Work Order Number: 459843

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/12/2022 7:12 PM	7:12 PM	4/13/2022 1:30 AM	1:30 AM	4/13/2022 7:30 AM	7:30 AM	
Lab ID	1743770	770	1743771	771	1743772	772	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	1.74	0.05	2.72	0.05	2.53	0.05	mg/L
Nitrite (as N)	0.46	0.05	0.28	0.05	0.28	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/12/2022 7:12 PM	7:12 PM	4/13/2022 1:30 AM	1:30 AM	4/13/2022 7:30 AM	7:30 AM	
LabID	1743770	077	1743771	177	1743772	772	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	2.48	0.01	3.39	0.01	4.10	0.01	mg/L
Hd	7.44	N/A	7.56	N/A	7.63	N/A	Hd
Total Kjeldahl Nitrogen	7.5	0.4	19.7	0.4	12.0	0.4	mg/L
Total Phosphorus (as P)	0.888	0.002	0.523	0.002	1.290	9000	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/12/2022 7:12 PM	7:12 PM	4/13/2022 1:30 AM	1:30 AM	4/13/2022 7:30 AM	7:30 AM	
Lab ID	1743	1743770	1743771	771	1743772	277.	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	8200000 [9800000]	100000	0000009	100000	1200000	100000	CFU/100mL

Work Order Number: 459843

Town of Cochrane - Wastewater

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/12/2022	4/12/2022 7:12 PM	4/13/2022	4/13/2022 1:30 AM	4/13/2022 7:30 AM	7:30 AM	
Lab ID	174;	1743770	1743	1743771	1743772	772	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	33	ဖ	48	9	48	9	mg/L
Carbonaceous BOD	63.2	9	38	9	39	9	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/12/2022	4/12/2022 7:12 PM	4/13/2022	4/13/2022 1:30 AM	4/13/2022 7:30 AM	7:30 AM	
Lab ID	174:	1743770	1743	1743771	1743772	2772	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	206	2	107	2	59.3	1.3	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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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.



Client:	Melissa Hoogenhoud	Work Order Number: 459995	459995
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa. Hoogenhoud@cochraneontario.com	Sampled By:	Chris Crawford
Date Order Received: 4/14/2022 Arrival Temperature: 17 °C	4/14/2022 17 °C	Analysis Started: Analysis Completed:	4/14/2022 4/22/2022

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	1744300	Wastewater	Grab		4/13/2022	3:30 PM
Sewage Plant Overflow	1744301	Wastewater	Grab		4/13/2022	11:30 AM
Sewage Plant Overflow	1744302	Wastewater	Grab		4/14/2022	7:45 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



Town of Cochrane - Wastewater

This report has been approved by:

Laboratory Director Adam Tam, M.Sc.

CERTIFICATE OF ANALYSIS

Work Order Number: 459995



Work Order Number: 459995

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/13/2022	4/13/2022 3:30 PM	4/13/2022 11:30 AM	11:30 AM	4/14/2022 7;45 AM	7:45 AM	
Lab ID	1744	1744300	1744301	301	1744302	302	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	2.29	0.05	1.89	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.49	0.05	0.28	0.05	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/13/2022	4/13/2022 3:30 PM	4/13/2022 11:30 AM	11:30 AM	4/14/2022 7:45 AM	7:45 AM	
Lab ID	1744	1744300	1744301	301	1744	1744302	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	7.33	0.02	3.90	0.01	8.74	0.02	mg/L
Hd	7.48	N/A	7.49	N/A	7.75	N/A	Hd
Total Kjeldahl Nitrogen	10.7	0.4	11.5	0.4	16.4	0.4	mg/L
Total Phosphorus (as P)	1.08	0.02	0.853	0.002	1.91	0.02	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/13/2022	4/13/2022 3:30 PM	4/13/2022 11:30 AM	11:30 AM	4/14/2022 7:45 AM	: 7:45 AM	
Lab ID	174	1744300	1744301	301	1744	1744302	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	10700000	100000	4000000	100000	1800000	100000	CFU/100mL

Work Order Number: 459995

Town of Cochrane - Wastewater

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/13/2022	4/13/2022 3:30 PM	4/13/2022	4/13/2022 11:30 AM	4/14/2022 7:45 AM	7:45 AM	
Lab ID	174	1744300	174	1744301	1744302	302	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	18	9	24	9	41	9	mg/L
Carbonaceous BOD	33	9	14	9	42	9	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/13/2022	4/13/2022 3:30 PM	4/13/2022	4/13/2022 11:30 AM	4/14/2022 7:45 AM	7:45 AM	
Lab ID	174	1744300	174	1744301	1744302	302	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	155	2	52.00	0.67	65.3	1.3	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.



Client:	Melissa Hoogenhoud	Work Order Number: 460224	460224
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa. Hoogenhoud@cochraneontario.com	Sampled By:	Mike Nelson
Date Order Received: 4/19/2022 Arrival Temperature: 20 °C	4/19/2022 20 °C	Analysis Started: Analysis Completed:	4/19/2022 4/25/2022

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	1744981	Wastewater	Grab		4/14/2022	3:00 PM
Sewage Plant Overflow	1744982	Wastewater	Grab		4/14/2022	11:00 PM
Sewage Plant Overflow	1744983	Wastewater	Grab		4/15/2022	7:00 AM
Sewage Plant Overflow	1744984	Wastewater	Grab		4/15/2022	2:30 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,



Town of Cochrane - Wastewater

Work Order Number: 460224

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

REPORT COMMENTS

Samples received past recommended hold time, Proceed with analysis as per client. 04/20/22 LT.

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

Page 2 of 4

Work Order Number: 460224

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/2022 3:00 PM	3:00 PM	4/14/2022 11:00 PM	11:00 PM	4/15/2022 7:00 AM	7:00 AM	4/15/2022 2:30 PM	2:30 PM	
Lab ID	1744981	1981	1744982	982	1744983	983	1744984	984	
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	0.15	0.05	1.29	0.05	2.56	0.05	<0.05	0.05	mg/L
Nitrite (as N)	0.18	0.05	0.62	0.05	0.46	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/2022 3:00 PM	3:00 PM	4/14/2022 11:00 PM	11:00 PM	4/15/2022 7:00 AM	7:00 AM	4/15/2022 2:30 PM	2:30 PM	
Lab ID	1744981	1981	1744982	.982	1744983	983	1744984	984	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	2.82	0.01	2.33	0.01	3.47	0.01	3.78	0.01	mg/L
Hd	7.34	N/A	7.49	N/A	7.87	N/A	7.56	N/A	Hd
Total Kjeldahl Nitrogen	6.3	0.4	3.8	0.4	5.3	0.4	5.8	0.4	mg/L
Total Phosphorus (as P)	0.446	0.002	0.446	0.002	0.567	0.002	0.757	0.002	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/2022 3:00 PM	3:00 PM	4/14/2022 11:00 PM	11:00 PM	4/15/2022 7:00 AM	7:00 AM	4/15/2022 2:30 PM	2:30 PM	
Lab ID	174	1744981	1744982	1982	1744	1744983	1744984	984	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	2000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	CFU/100mL

Page 3 of 4

Work Order Number: 460224

Town of Cochrane - Wastewater

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	rt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/202	4/14/2022 3:00 PM	4/14/2022 11:00 PM	11:00 PM	4/15/2022 7:00 AM	7:00 AM	4/15/2022 2:30 PM	2:30 PM	
Lab ID	1744981	1981	1744982	982	1744983	983	1744984	984	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	12.1	+-	8	-	6.3	-	14.8	-	mg/L
Carbonaceous BOD	8.6	-	6.9	-	4.3	-	13.7	-	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/14/202	4/14/2022 3:00 PM	4/14/2022 11:00 PM	11:00 PM	4/15/2022 7:00 AM	7:00 AM	4/15/2022 2:30 PM	2:30 PM	
Lab ID	1744981	1981	1744982	982	1744983	983	1744	1744984	
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	93	2	51	2	40.7	1.3	46.0	1.3	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.

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: 1001 24 2022	Time of Call: $\frac{7.05}{}$ a.m./p.m.
SAC Reference #: 1-1RY35M	Person Who Called:
Called SAC at: 17:05 Re	eported By: Jak kowba
Called MOH at: 17,18 Re	eported By"
Bypass: Spill: I	Leak:Overflow:
Location of Incident: しずしいす	er plan
Time of Incident: 16.75 a.m./p.m. Recei	iver: Litibeller creek
Details of Incident: Spain Tha	w Rock
Downstream Users:	
Possible Effects on Receiver, Environment or I	Downstream Users:
NOTE: Take 3 Raw Sewage Samples Per Incidoverflow: 1. 5-day BOD and CBOD, Suspended Soli Addition Calls Town Hall: Phone No. 272- 4361 Fax No. Details of Call:	272-6068 Time of Call:
Termination of Incident	
Date: 04/26/22 Time of Call: 0918	Person Contacted: Mare Harris
Time of Termination: 0500 Approxim	nate Volume: 408-3 Cu. Meters
Duration of Bypass: 45 h 55 m. vi	
	Explain:
Reported By:	SForm.014.Bypa.2013



Melissa HoogenhoudWork Order Number:460759Town of Cochrane - WastewaterPO #:171 Fourth Ave, Box 490Information not providedCochrane, ON, POL 1C0Project #:Overflow(705) 272-4232 / (705) 272-2634DWS #:OverflowMelissa.Hoogenhoud@cochraneontario.comSampled By:Benoit Parent4/25/2022Analysis Started:4/25/202218 °CAnalysis Completed:5/2/2022				
oogenhoud Work Order Number: ochrane - Wastewater Ave, Box 490 ON, P0L 1C0 Project #: 4232 / (705) 272-2634 cogenhoud@cochraneontario.com Analysis Started:	5/2/2022		18 °C	Arrival Temperature:
Work Order Number: PO #: Regulation: Project #: DWS #: Sampled By:	4/25/2022	Analysis Started:	4/25/2022	Date Order Received: 4/25/2022
tewater Work Order Number: PO #: Regulation: Project #: DWS #:	Benoit Parent	Sampled By:	Melissa.Hoogenhoud@cochraneontario.com	Email:
Work Order Number: PO #: Regulation: Project #:		DWS #:	(705) 272-4232 / (705) 272-2634	Phone/Fax:
Work Order Number: PO #: Regulation:	Overflow	Project #:	Cochrane, ON, P0L 1C0	
Work Order Number: PO #:	Information not provided	Regulation:	171 Fourth Ave, Box 490	Address:
Work Order Number:		PO #:	Town of Cochrane - Wastewater	Company:
	460759	Number:	Melissa Hoogenhoud	Client:

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	1746706	Wastewater	Grab		4/24/2022	4:45 PM
Sewage Plant Overflow	1746707	Wastewater	Grab		4/24/2022	11:00 PM
Sewage Plant Overflow	1746708	Wastewater	Grab		4/25/2022	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



Work Order Number: 460759

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

Work Order Number: 460759

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	Overflow	Sewage Plant Overflow	Overflow	
Sample Date	4/24/2022 4:45 PM	4:45 PM	4/24/2022 11:00 PM	1:00 PM	4/25/2022 7:00 AM	.00 AM	
Lab ID	1746706	706	1746707	07	1746708	8	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	2.68	0.05	2.94	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.12	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow	rt Overflow	Sewage Plant Overflow	Overflow	Sewage Plant Overflow	Overflow	
Sample Date	4/24/2022 4:45 PM	4:45 PM	4/24/2022 11:00 PM	1:00 PM	4/25/2022 7:00 AM	:00 AM	
LabID	1746706	706	1746707	07	1746708)8	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	2.57	0.01	1.43	0.01	2.12	0.01	mg/L
pH	7.32	N/A	7.47	N/A	7.63	N/A	рН
Total Kjeldahl Nitrogen	9.0	0.4	6.2	0.4	8.1	0.4	mg/L
Total Phosphorus (as P)	1.01	0.02	0.496	0.002	0.687	0.006	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	Overflow	Sewage Plant Overflow	Overflow	
Sample Date	4/24/2022 4:45 PM	4:45 PM	4/24/2022 11:00 PM	1:00 PM	4/25/2022 7:00 AM	:00 AM	
Lab ID	1746706	706	1746707	07	1746708)8	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	5200000	100000	1000000	100000	[900000]	100000	CFU/100mL



Town of Cochrane - Wastewater

CERTIFICATE OF ANALYSIS

Work Order Number: 460759

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	4/24/2022 4:45 PM	4:45 PM	4/24/2022 11:00 PM	11:00 PM	4/25/2022 7:00 AM	7:00 AM	
Lab ID	1746706	706	1746707	707	1746708	708	
Охудеп Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	44	6	30	6	27	O	mg/L
Carbonaceous BOD	38	6	20	6	16.1	_	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	t Overflow	
Sample Date	4/24/2022 4:45 PM	4:45 PM	4/24/2022 11:00 PM	11:00 PM	4/25/2022 7:00 AM	7:00 AM	
Lab ID	1746706	706	1746707	707	1746708	708	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	102 [109]	2	70.30	0.67	74.8	0.8	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.

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.

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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.



Client:	Melissa Hoogenhoud	Work Order Number: 460940	460940
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Benoit Parent
Date Order Received:	4/26/2022	Analysis Started:	4/26/2022
Arrival Temperature:	14 °C	Analysis Completed:	5/2/2022

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	1747463	Wastewater	Grab		4/25/2022	3:00 PM
Sewage Plant Overflow	1747464	Wastewater	Grab		4/25/2022	11:00 PM
Sewage Plant Overflow	1747465	Wastewater	Grab		4/26/2022	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



Work Order Number: 460940

This report has been approved by:

Town of Cochrane - Wastewater

Adam Tam, M.Sc.

Laboratory Director

Work Order Number: 460940

Town of Cochrane - Wastewater

WORK ORDER RESULTS

	Sauman Dia		Counce Dia	The Company	Sauraga Dian	Overflow	
Sample Description	Cowage Flair Cyclica	I Cydinow	COMPAGE TOTAL CACINGM	Cyclica	Complete Carrier		
Sample Date	4/25/2022 3:00 PM	3:00 PM	4/25/2022 11:00 PM	11:00 PM	4/26/2022 7:00 AM	7:00 AM	
Lab ID	1747463	463	1747464	464	1747465	165	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	2.70	0.05	2.97	0.05	2.92	0.05	mg/L
Nitrite (as N)	0.06	0.05	0.08	0.05	0.17	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	it Overflow	
Sample Date	4/25/2022 3:00 PM	3:00 PM	4/25/2022 11:00 PM	11:00 PM	4/26/2022 7:00 AM	7:00 AM	
Lab ID	1747463	463	1747464	464	1747465	165	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	1.80	0.01	1.55	0.01	2.49	0.01	mg/L
рH	7.6	N/A	7.63	N/A	7.61	N/A	рН
Total Kjeldahl Nitrogen	6.8	0.4	9.1	0.4	13.4	0.4	mg/L
Total Phosphorus (as P)	0.36	0.02	0.463	0.002	0.748	0.002	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	4/25/2022 3:00 PM	3:00 PM	4/25/2022 11:00 PM	11:00 PM	4/26/2022 7:00 AM	7:00 AM	
Lab ID	1747463	463	1747464	464	1747465	465	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	1800000	100000	1000000	100000	1900000	100000	CFU/100mL



Work Order Number: 460940

Town of Cochrane - Wastewater

	!	•	!		2		
Sample Description	Sewage Plant Overnow	COVERTION	Sewage Frant Overnow	II CABIIIOM	Sewage Plant Cyelliow	COMBINA	
Sample Date	4/25/2022 3:00 PM	3:00 PM	4/25/2022 11:00 PM	11:00 PM	4/26/2022 7:00 AM	7:00 AM	
Lab ID	1747463	63	1747464	464	1747465	65	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	14.9	1	12.3		15.3	1	mg/L
Carbonaceous BOD	13.4	_	11.7		15.6	_	mg/L
Sample Description	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	Overflow	
Sample Date	4/25/2022 3:00 PM	3:00 PM	4/25/2022 11:00 PM	11:00 PM	4/26/2022 7:00 AM	7:00 AM	
Lab ID	1747463	163	1747464	464	1747465	65	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	62	_	30.4	0.8	36.0	0.8	mg/L

LEGEND

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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.



Date Order Received: Arrival Temperature:	Phone/Fax: Email:	Client: Company: Address:
4/26/2022 14 °C	Cochrane, ON, P0L 1C0 (705) 272-4232 / (705) 272-2634 Melissa.Hoogenhoud@cochraneontario.com	Melissa Hoogenhoud Town of Cochrane - Wastewater 171 Fourth Ave, Box 490
Analysis Started: Analysis Completed:	Project #: DWS #: Sampled By:	Work Order Number: PO #: Regulation:
4/26/2022 5/2/2022	Overflow Benoit Parent	460937 Information not provided

WORK ORDER SUMMARY

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

Sewage Plant Overflow 1747452	Sample Description Lab ID
Wastewater	Matrix
Grab	Туре
	Comments
4/26/2022	Date Collected
8:20 AM	Time Collected

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: 460937

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Work Order Number: 460937

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	4/26/2022 8:20 AM	8:20 AM	
Lab ID	1747452	452	
Anions	Result	MDL	Units
Nitrate (as N)	2.34	0.05	mg/L
Nitrite (as N)	0.21	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	4/26/2022 8:20 AM	8:20 AM	
Lab ID	1747452	452	
General Chemistry	Result	MDL	Units
Ammonia (as N)	3.53	0.01	mg/L
рН	7.59	N/A	рН
Total Kjeldahl Nitrogen	14.6	0.4	mg/L
Total Phosphorus (as P)	1.370	0.006	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	
Sample Date	4/26/2022 8:20 AM	8:20 AM	
Lab ID	1747452	452	
Microbiology	Result	MDL	Units
Escherichia coli	2600000	100000	CFU/100mL



Work Order Number: 460937

Town of Cochrane - Wastewater

mg/L	4	158	Total Suspended Solids
Units	MDL	Result	Solids
	7452	1747452	LabID
	2 8:20 AM	4/26/2022 8:20 AM	Sample Date
	int Overflow	Sewage Plant Overflow	Sample Description
mg/L	o	23	Carbonaceous BOD
mg/L	6	42	BOD (5 day)
Units	MDL	Result	Охудеп Demand
	7452	1747452	Lab ID
	8:20 AM	4/26/2022 8:20 AM	Sample Date
	nt Overflow	Sewage Plant Overflow	Sample Description

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.

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: 05/12/22	Time of Call: 09	57	(a.nh./p.m.
SAC Reference #: 1-15WYP1	Person Who Called	1: Bei	noit Pavent
Called SAC at: 0957 Aaron	Reported By: Benoit	Par	ent
Called MOH at: 1003 wicshage Duty	Reported By" Bevioit	Pare	at
Called MOH at: 1003 wicsbage Duty inspect Bypass: Spill:	Leak:Ov	erflow:_	
Location of Incident: Cochrane	STP 503 whi	terx	lant rd.
Time of Incident: 0945 a.m./p.m. R	1 1		
Details of Incident: rain/wet	weather		
Downstream Users: VICO Possible Effects on Receiver, Environment	,	/-	
NOTE: Take 3 Raw Sewage Samples Per I overflow: 1. 5-day BOD and CBOD, Suspended Addition Calls Town Hall: Phone No. 272-4361 Fax I Details of Call:	Solids, pH, TKN and Total p	hospho	rus
Termination of Incident	_	1	
Date: $05/12/22$ Time of Call: 2305	Person Contacted: ('c	2/18/	
Time of Termination: <u>1302</u> Appro	oximate Volume: 1 w	> C	u. Meters
Duration of Bypass: 13 1/2 5 vm	i/\		
Current Status: Chlorinating? Yes:1	No: Explain:		
Further Action Required: N/A			
Reported By: Benoit Parent	-		

SForm.014.Bypa.2013



Client:	Melissa Hoogenhoud	Work Order Number: 462690	462690
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Benoit Parent
Date Order Received: Arrival Temperature:	5/13/2022 19 °C	Analysis Started: Analysis Completed:	5/13/2022 5/30/2022

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	1753402	Wastewater	Grab		5/12/2022	9:49 AM
Sewage Plant Overflow	1753403	Wastewater	Grab		5/12/2022	3:00 PM
Sewage Plant Overflow	1753404	Wastewater	Grab		5/12/2022	11:00 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)	Garson	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
	•		



Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

CERTIFICATE OF ANALYSIS

Work Order Number: 462690

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



Work Order Number: 462690

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/12/2022 9:49 AM	9:49 AM	5/12/2022 3:00 PM	3:00 PM	5/12/2022 11:00 PM	11:00 PM	
Lab ID	1753	1753402	1753	1753403	1753404	404	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	90:0	0.05	0.22	0.05	<0.05	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.53	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/12/2022 9:49 AM	9:49 AM	5/12/2022 3:00 PM	3:00 PM	5/12/2022 11:00 PM	11:00 PM	
Lab ID	1753	1753402	1753	1753403	1753404	404	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	4.19	0.01	3.17	0.01	7.31	0.02	mg/L
Н	6.72	N/A	7.81	N/A	7.83	N/A	Hd
Total Kjeldahl Nitrogen	119	-	7.9	0.4	10.8	9.0	mg/L
Total Phosphorus (as P)	4.98	0.05	0.745	0.002	1.12 [1.14]	0.02	mg/L
Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/12/2022 9:49 AM	9:49 AM	5/12/2022 3:00 PM	3:00 PM	5/12/2022 11:00 PM	11:00 PM	
Lab ID	1753	1753402	1753	1753403	1753404	404	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	2600000	100000	3500000	100000	4900000 [5200000]	100000	CFU/100mL

Town of Cochrane - Wastewater

Work Order Number: 462690

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/12/2022	5/12/2022 9:49 AM	5/12/2022	5/12/2022 3:00 PM	5/12/2022 11:00 PM	11:00 PM	
Lab ID	1753	1753402	1753	1753403	1753404	3404	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	220	20	41	9	58 [42]	9	mg/L
Carbonaceous BOD	280	20	24	9	49	9	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	5/12/2023	5/12/2022 9:49 AM	5/12/2022	5/12/2022 3:00 PM	5/12/2022 11:00 PM	11:00 PM	
Lab ID	175	1753402	1753	1753403	1753404	3404	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	1590	10	131.0	2.2	80.0	2.5	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.

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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.

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: 06-11 -	22	Time of	f Call: 18,46	a.m	./p.m.
SAC Reference #:	1-14A75	R Person	Who Called:	Miles	nelson
	18:43				
Called MOH at:	8:50	Reported By"_			
Bypass:	Spill:	Leak:	Overflo	w:	
Location of Incident	: widte w		t . 1 &		
Time of Incident: /	a.m./p.m. R	eceiver:	1. Labelle	Breic	<u> </u>
	Over flow				
Downstream Users:	Nove				
Possible Effects on I	Receiver, Environment	or Downstream \	Users: <u>N</u>	114	
overflow: 1. 5-day BOD a Addition Calls Town Hall: Phone	Sewage Samples Per I and CBOD, Suspended No. 272-4361 Fax I	Solids, pH, TKN No. 272-6068	I and Total phos	phorus	-
Termination of Inc	ident				
Date: 06-12-27	Time of Call: 8200	Person Con	ntacted:		<u></u>
Time of Termination	n: <u>07.′0() </u>	oximate Volume	263	_Cu. Meters	s
Duration of Bypass:	13 km				
Current Status: Chlo	orinating? Yes: 1	No:Expla	in:		
Further Action Requ	nired: non-t	•			
Reported By:	Le		SForm.014.Bypa.20	13	



Client:	Melissa Hoogenhoud	Work Order Number:	465997
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Mike Nelson
Date Order Received: 6/13/2022 Arrival Temperature: 21 °C	6/13/2022 21 °C	Analysis Started: Analysis Completed:	6/13/2022 6/21/2022

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	1765046	Wastewater	Grab		6/11/2022	6:10 PM
Sewage Plant Overflow	1765047	Wastewater	Grab		6/11/2022	11:00 PM
Sewage Plant Overflow	1765048	Wastewater	Grab		6/12/2022	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

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

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



Work Order Number: 465997

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	6/11/2022	6/11/2022 6:10 PM	6/11/2022	6/11/2022 11:00 PM	6/12/2022 7:00 AM	7:00 AM	
Lab ID	1765	1765046	1765	1765047	1765048	048	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Nitrite (as N)	0.36	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	6/11/2022	6/11/2022 6:10 PM	6/11/2022	6/11/2022 11:00 PM	6/12/2022 7:00 AM	7:00 AM	
Lab ID	176	1765046	1765	1765047	1765	1765048	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	13.5	0.1	15.5	0.1	19.8	0.1	mg/L
Hd	6.61	N/A	7.11	N/A	7.36	N/A	H
Total Kjeldahl Nitrogen	70.0	0.8	31.3	0.4	37.2	0.4	mg/L
Total Phosphorus (as P)	2.21	0.02	1.86	0.02	2.54	0.02	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	6/11/2022	6/11/2022 6:10 PM	6/11/2022 11:00 PM	11:00 PM	6/12/2022 7:00 AM	7:00 AM	
Lab ID	176	1765046	176	1765047	1765	1765048	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	7300000	100000	4700000	100000	2600000	100000	CFU/100mL

Town of Cochrane - Wastewater

Work Order Number: 465997

Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	6/11/202	6/11/2022 6:10 PM	6/11/2022	6/11/2022 11:00 PM	6/12/2022 7:00 AM	7:00 AM	
Lab ID	176	1765046	1765	1765047	1765	1765048	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Onits
BOD (5 day)	54	10	71.4	9	107	10	mg/L
Carbonaceous BOD	3.0	0.5	28	9	29	10	mg/L
Sample Description	Sewage Pla	Sewage Plant Overflow	Sewage Pla	Sewage Plant Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	6/11/202	6/11/2022 6:10 PM	6/11/2022	6/11/2022 11:00 PM	6/12/2022 7:00 AM	7:00 AM	
Lab ID	176	1765046	1765	1765047	1765	1765048	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	314	4	64	4	140	4	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.

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.

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: 06-30-22	Time of Call:_		_a.m./p.m.
SAC Reference #: 1-1 V F G D M	Person Who C	Called:	
Called SAC at: 15,45	Reported By:	90	
Called MOH at: 15:53 Bypass: Spill:	Reported By"		
Bypass:Spill:	Leak:	_Overflow:	
Location of Incident:			
Time of Incident: 15, 15 a.m./p.m. R	eceiver: <u>L</u> , LL,	baile	
Details of Incident: Over flow du	e to Rain		
Downstream Users:			
Possible Effects on Receiver, Environment	or Downstream Users:_	None	1 X 3
NOTE: Take 3 Raw Sewage Samples Per I overflow: 1. 5-day BOD and CBOD, Suspended Addition Calls Town Hall: Phone No. 272- 4361 Fax I Details of Call:	Solids, pH, TKN and T	otal phosphorus	
Termination of Incident			
Date: <u>06-30-22</u> Time of Call: <u>22:4</u>	Person Contacted	: Dorthy	
Time of Termination: 10:30 Appr	oximate Volume:	75 Cu. M	Meters
Duration of Bypass: 720 20	/		
Current Status: Chlorinating? Yes:	No: Explain:		
Further Action Required: Now Reported By: Nola Nolan	₹	*****	
Reported By: Mile Nolson	SForm.0	014.Bypa.2013	



Client:	Melissa Hoogenhoud	Work Order Number:	468118
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa. Hoogenhoud@cochraneontario.com	Sampled By:	Mike Nelson
Date Order Received: 7/2/2022 Arrival Temperature: 21 °C	7/2/2022 21 °C	Analysis Started: Analysis Completed:	7/2/2022 7/11/2022

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	1772200	Wastewater	Grab		6/30/2022	3:20 PM
Sewage Plant Overflow	1772201	Wastewater	Grab		6/30/2022	10:35 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



Town of Cochrane - Wastewater

This report has been approved by:

Laboratory Director Adam Tam, M.Sc.

CERTIFICATE OF ANALYSIS

Work Order Number: 468118

Work Order Number: 468118

CERTIFICATE OF ANALYSIS

WORK ORDER RESULTS

Town of Cochrane - Wastewater

Units Units mg/L mg/L mg/L mg/L mg/L 핌 Sewage Plant Overflow MDL 0.05 0.05 Sewage Plant Overflow 0.02 MDL 0.1 N A 6/30/2022 10:35 PM 6/30/2022 10:35 PM 1772201 1772201 Result Result <0.05 <0.05 6.51 4.61 89 0.02 Sewage Plant Overflow 0.05 0.05 Sewage Plant Overflow MDL Α× 0.1 6/30/2022 3:20 PM 6/30/2022 3:20 PM 1772200 1772200 Result Result <0.05 <0.05 5.79 105 [104] 14.1 Total Phosphorus (as P) Sample Description Total Kjeldahl Nitrogen Sample Description General Chemistry Ammonia (as N) Sample Date Sample Date Nitrate (as N) Nitrite (as N) Lab ID Lab ID Anions

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

Units CFU/100mL

Result 3400000

Sewage Plant Overflow

Sewage Plant Overflow

Sample Description

Sample Date

Lab ID

6/30/2022 3:20 PM

1772200

6/30/2022 10:35 PM

1772201

100000

100000

Result 3800000 [4000000]

Escherichia coli

Microbiology

Work Order Number: 468118

Town of Cochrane - Wastewater

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Pig	Sewage Plant Overflow	
Sample Date	6/30/2022 3:20 PM	3:20 PM	6/30/2022	6/30/2022 10:35 PM	
LabID	1772200	200	177.	1772201	
Oxygen Demand	Result	MDL	Result	MDL	Units
BOD (5 day)	349	30	200	30	mg/L
Carbonaceous BOD	346	30	210	30	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Pla	Sewage Plant Overflow	
Sample Date	6/30/2022 3:20 PM	3:20 PM	6/30/2022	6/30/2022 10:35 PM	
Lab ID	1772200	200	177	1772201	
Solids	Result	MDL	Result	MDL	Units
Total Suspended Solids	637.0	6.7	613.0	6.7	mg/L

LEGEND

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

MDL: Method detection limit or minimum reporting limit.

[]: 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.

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: 10-18-22	Time of C	all: 1 4	1:35	a.m./p.m.
SAC Reference #: 1-28 166	Person W	ho Called	Mil	u
Called SAC at: 14:35		•		
Called MOH at: 14:48	Reported By"			
Bypass: Spill:	Leak:	Ove	erflow:	
Location of Incident: WWTP				
Time of Incident: 1 7.30 a.m./p.m. Rec	eiver: L.L	L. belle	Cr	eelc
Details of Incident: over flow	due to i	necth		
Downstream Users: O ^ &				
Possible Effects on Receiver, Environment or	Downstream Use	ers:	10x10	
NOTE: Take 3 Raw Sewage Samples Per Incoverflow: 1. 5-day BOD and CBOD, Suspended Son Addition Calls Town Hall: Phone No. 272-4361 Fax Not Details of Call:	olids, pH, TKN ar	nd Total pl	nosphorus	3
Termination of Incident				
Date: \$0-18-22 Time of Call: 0900	Person Contac	cted: <u>\$</u>	Tepha	nie
Time of Termination: <u>07.00</u> Approx	imate Volume:	2650	37_Cu. 1	Meters
Duration of Bypass: 16 %, s				
Current Status: Chlorinating? Yes: No	:Explain:			
Further Action Required: None				
Further Action Required: None Reported By: 1/4 / 2/54	SFo	orm.014.Byp	a.2013	



Date Order Received: Arrival Temperature:	Client: Company: Address: Phone: Email:
10/19/2022 19 °C	Melissa Hoogenhoud Town of Cochrane - Wastewater 171 Fourth Ave, Box 490 Cochrane, ON, POL 1C0 (705) 272-9093 Melissa.Hoogenhoud@cochraneontario.com
Analysis Started: Analysis Completed:	Work Order Number: PO #: Regulation: Project #: DWS #: Sampled By:
10/19/2022 11/1/2022	480530 11595 Information not provided Overflow Michael Nelson

WORK ORDER SUMMARY

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

10/18/2022	2:45 PM
10/18/2022	10:45 PM
10/19/2022	6:46 AM
	10/18/2022 10/19/2022

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



Town of Cochrane - Wastewater

Work Order Number: 480530

REPORT COMMENTS

* BOD and cBOD re-ran past 4-day hold time as a result of an issue with original batch data. 10/28/22 HH

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director

Work Order Number: 480530

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description Sample Date Lab ID	Sewage Plant Overflow 10/18/2022 2:45 PM 1814914	nnt Overflow 2 2:45 PM 1914	Sewage Plant Overflow 10/18/2022 10:45 PM 1814915	nt Overflow 10:45 PM 915	Sewage Plant Overflow 10/19/2022 6:46 AM 1814916	1 t Overflow 2 6:46 AM 916	
Nitrate (as N)	<0.05	0.05	0.71	0.05	3.06	0.05	
Nitrite (as N)	<0.05	0.05	0.25	0.05	0.25	0.05	
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	10/18/2022 2:45 PM	2 2:45 PM	10/18/2022 10:45 PM	10:45 PM	10/19/2022 6:46 AM	6:46 AM	
Lab ID	1814914	1914	1814915	915	1814916	916	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	
Ammonia (as N)	9.6	0.1	2.47	0.01	3.70	0.01	
PH	7.25	N/A	7.33	N/A	7.65	N/A	
Total Kjeldahl Nitrogen	19.3	0.4	11.5	0.4	12.5	0.4	
Total Phosphorus (as P)	2.05 1.93	0.02	0.846	0.002	1.28	0.02	
Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	10/18/2022 2:45 PM	2 2:45 PM	10/18/2022 10:45 PM	10:45 PM	10/19/2022 6:46 AM	2 6:46 AM	
Lab ID	1814914	1914	1814915	915	1814916	916	
Microbiology	Result	MDL	Result	MDL	Result	MDL	
Escherichia coli	400000	100000	1200000	100000	4500 4900	100	



Work Order Number: 480530

Town of Cochrane - Wastewater

Sewage Plant Overflow		
Sewage Plant Overflow		
Sawara Plant Overflow		

Total Suspended Solids	Solids	Lab ID	Sample Date	Sample Description	Carbonaceous BOD	BOD (5 day)	Oxygen Demand	Lab ID	Sample Date	Sample Description
3										
207.0	Result	1814914	10/18/2022 2:45 PM	Sewage Plant Overflow	60.4	41	Result	1814914	10/18/2022 2:45 PM	Sewage Plant Overflow
3.3	MDL)14	2:45 PM	t Overflow	6	6	MDL	914	2:45 PM	t Overflow
155	Result	1814915	10/18/2022	Sewage Plant Overflow	8.3	44	Result	1814915	10/18/2022 10:45 PM	Sewage Plant Overflow
5	MDL	.915	10/18/2022 10:45 PM	nt Overflow	1	6	MDL	.915	10:45 PM	nt Overflow
1.30	Result	1814916	10/19/2022 6:46 AM	Sewage Plant Overflow	6.7	29	Result	1814916	10/19/2022 6:46 AM	Sewage Plant Overflow
0.67	MDL	.916	2 6:46 AM	nt Overflow	ω	8	MDL	.916	2 6:46 AM	nt 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.

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: 100 0 202 Time of Call: 19: 55 a.m./p.m.
SAC Reference #: 1-28 WW VAIT Person Who Called: Mila Nelson
Called SAC at: 17:53 Reported 10: Ansluss
Called MOH at: 15:10 Reported By"
Bypass: Spill: Leak: Overflow:
Location of Incident: Wwtp
Time of Incident: 14:00 a.m./p.m. Receiver: Lillie de creek
Details of Incident: Heavy Rain
Downstream Users:
Possible Effects on Receiver, Environment or Downstream Users:
NOTE: Take 3 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: Nov 6202 Time of Call: 940 Person Contacted: Peter
Time of Termination: 0630 Approximate Volume: 12,260 Cu. Meters
Duration of Bypass: 15.5
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Mile Nelson



Client:	Melissa Hoogenhoud	Work Order Number:	482394
Company:	Town of Cochrane - Wastewater	PO #:	11595
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone:	(705) 272-9093	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Andy
Date Order Received:	11/7/2022	Analysis Started:	11/7/2022
Arrival Temperature:	16 °C	Analysis Completed:	11/15/2022

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	1822691	Wastewater	Grab		11/5/2022	3:00 PM
Sewage Plant Overflow	1822692	Wastewater	Grab		11/5/2022	11:00 PM
Sewage Plant Overflow	1822693	Wastewater	Grab		11/6/2022	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)	Kirkland Lake	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: 482394

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

Work Order Number: 482394

Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	Overflow	
Sample Date	11/5/2022 3:00 PM	3:00 PM	11/5/2022 11:00 PM	11:00 PM	11/6/2022 7:00 AM	7:00 AM	
Lab ID	1822691	691	1822692	592	1822693	93	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	0.85 [0.84]	0.05	3.07	0.05	mg/L
Nitrite (as N)	<0.05	0.05	0.45 [0.45]	0.05	0.21	0.05	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	it Overflow	Sewage Plant Overflow	Overflow	
Sample Date	11/5/2022 3:00 PM	3:00 PM	11/5/2022 11:00 PM	11:00 PM	11/6/2022 7:00 AM	7:00 AM	
Lab ID	1822691	691	1822692	592	1822693	93	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	3.37	0.01	2.78	0.01	1.94	0.01	mg/L
PH	6.74	N/A	7.46	N/A	7.66	N/A	рН
Total Kjeldahl Nitrogen	19.0	0.4	7.0	0.4	4.8	0.4	mg/L
Total Phosphorus (as P)	1.24	0.02	0.691	0.002	0.370	0.002	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	Overflow	
Sample Date	11/5/2022 3:00 PM	3:00 PM	11/5/2022 11:00 PM	11:00 PM	11/6/2022 7:00 AM	7:00 AM	
Lab ID	1822691	:691	1822692	692	1822693	93	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Units
Escherichia coli	3760000 [3550000]	10000	1670000	10000	237000	1000	CFU/100mL

Date of Issue: 11/16/2022 12:59

Work Order Number: 482394

Town of Cochrane - Wastewater

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	11/5/2022 3:00 PM	3:00 PM	11/5/2022 11:00 PM	11:00 PM	11/6/2022 7:00 AM	7:00 AM	
Lab ID	1822691	691	1822	1822692	1822693	693	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	54	6	18	6	17	6	mg/L
Carbonaceous BOD	57	Ø	22 [23]	O	19	თ	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	11/5/2022 3:00 PM	3:00 PM	11/5/2022	11/5/2022 11:00 PM	11/6/2022 7:00 AM	7:00 AM	
Lab ID	1822691	691	1822	1822692	1822693	1693	
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	204	4	58.7	1.3	28.7	1.3	mg/L

EGEND

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.

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: 12-30-22		Time of Call: 12:50 a.m./p.m.
SAC Reference #:	1-2FQC45	Person Who Called: Mila
Called SAC at:	12:48	Reported Bol Sofice
Called MOH at:	2:50	Reported By"
Bypass:	Spill:	Leak:Overflow:
Location of Incident:_	we ip	
		eceiver: Littebelle Creek
Details of Incident:	Wern ve	ether mell Rain
Downstream Users:	Nowe	
Possible Effects on Ro	eceiver, Environment	or Downstream Users:
overflow: 1. 5-day BOD an Addition Calls Town Hall: Phone N	nd CBOD, Suspended	ncident & Have them Tested For every 8 hours during the Solids, pH, TKN and Total phosphorus No. 272-6068 Time of Call:
Termination of Incid	lent	
Date: <u>Nec 31 2002</u> T	ime of Call:	Person Contacted:
Time of Termination:	21:00 Appro	oximate Volume: 1.300 Cu. Meters
Duration of Bypass:_	8.25	
Current Status: Chlor	rinating? Yes: N	No: Explain:
Further Action Requi	red: Nove	
Reported By: M	lee	SForm.014.Bypa.2013

Client:	Melissa Hoogenhoud	Work Order Number:	487086
Company:	Town of Cochrane - Wastewater	PO #:	11595
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Phone:	(705) 272-9093	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Andy Crickard
Date Order Received: 12/31/2022 Arrival Temperature: 18 °C	12/31/2022 18 °C	Analysis Started: Analysis Completed:	12/31/2022 1/9/2023

WORK ORDER SUMMARY

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

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1838606	Wastewater	Grab		12/30/2022	12:45 PM
Sewage Plant Overflow	1838607	Wastewater	Grab		12/30/2022	9:00 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

Town of Cochrane - Wastewater

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

Work Order Number: 487086



Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant Overflow	t Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	12/30/2022 12:45 PM	12:45 PM	12/30/2022 9:00 PM	9:00 PM	
Lab ID	1838606	909	1838607	209	
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	nt Overflow	
Sample Date	12/30/2022 12:45 PM	12:45 PM	12/30/2022 9:00 PM	2 9:00 PM	
Lab ID	1838606	909	1838607	607	
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	6.9	0.1	8.9	0.1	mg/L
Hd	7.03	N/A	7.15	N/A	Hd
Total Kjeldahl Nitrogen	19.0	0.4	15.6	0.4	mg/L
Total Phosphorus (as P)	2.44 [2.46]	0.02	1.61	0.02	mg/L
Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	12/30/2022 12:45 PM	12:45 PM	12/30/2022 9:00 PM	2 9:00 PM	
LabID	1838606	909	1838607	209	
Microbiology	Result	MDL	Result	MDL	Units
Escherichia coli	3900000 [4000000]	100000	490000	100000	CFU/100mL

Work Order Number: 487086



Work Order Number: 487086

Town of Cochrane - Wastewater

Sample Description	Sewage Plant Overflow	nt Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	12/30/2022	12/30/2022 12:45 PM	12/30/202	12/30/2022 9:00 PM	
Lab ID	1838	1838606	1838607	1607	
Oxygen Demand	Result	MDL	Result	MDL	Units
BOD (5 day)	150	30	160	30	mg/L
Carbonaceous BOD	130	30	130	30	mg/L
Sample Description	Sewage Plant Overflow	int Overflow	Sewage Plant Overflow	nt Overflow	
Sample Date	12/30/2022	12/30/2022 12:45 PM	12/30/202;	12/30/2022 9:00 PM	
Lab ID	1838	1838606	1838	1838607	
Solids	Result	MDL	Result	MDL	Units
Total Suspended Solids	442	4	7760	10	mg/L

LEGEND

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

MDL: Method detection limit or minimum reporting limit.

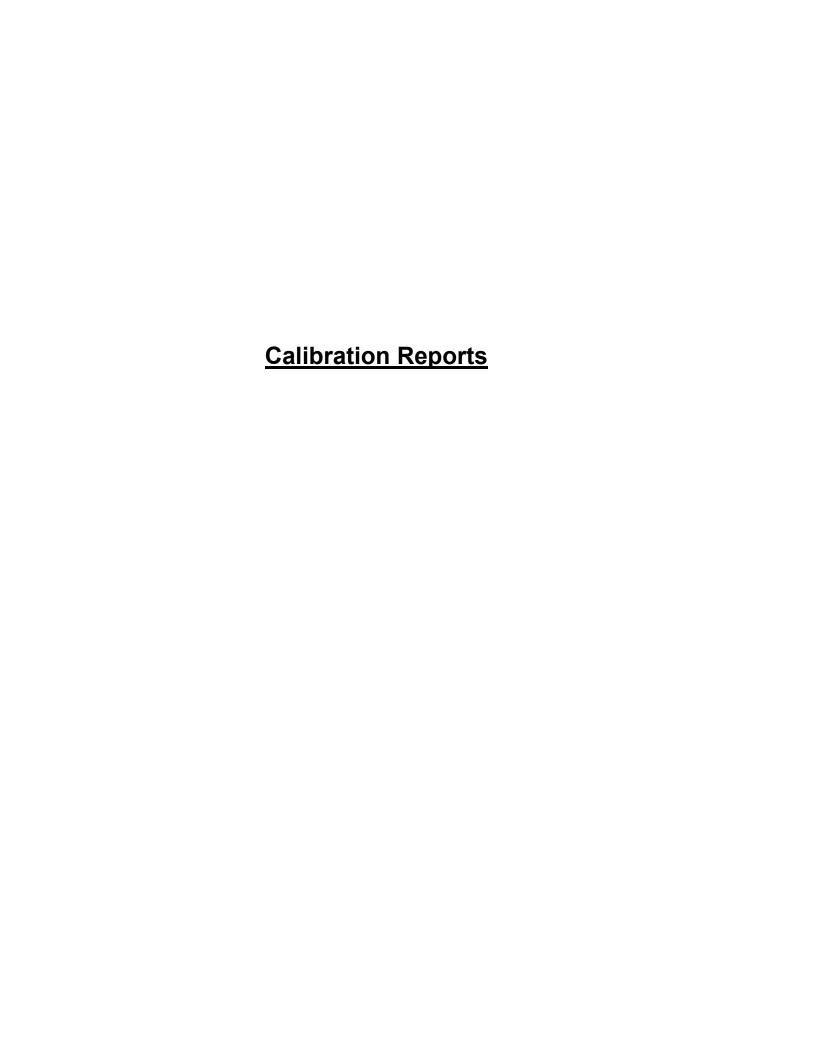
[]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

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

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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.





cation:			Cochr	ane WWTP		
RG #	9		Vork	Order #:		
strument:		Porta	able Di	ssolved Oxygen N	Meter	
CWA ID:_			_ S	erial #:	1609000039	927
	me: 23 / 03 / 22 DD/MM/YY s: 1	② 13:15 24hour clock		nd Day/Tim otal Man Ho	e: 23 / 03 / 22 DD/MM/YY DURS: 1/4	② 13:30 . 24hour clock
	ork Order: Maintenance	Correcti	ve Wo	ork Order	Other:	
	Transmitter				ity ∏Flow 🗸	Other: DO
	n: See R				Λ.α.	Loft
Inpu	t/Standard	Actual Value	s Foun	% Accuracy	Actual Value	Left % Accuracy
	M					
Material U	Ised•	% Accurac	y Calc	ulation => ABS(/	(Actual Value/Standa	rd) –1] x 100%)
Quantity	Part	#	•		Description	
1			6r	mm of Distilled w	ater as per calibrati	on instructions
Comment						
ı	n (1/4") of water o stabilize. Begin		30 se	conas. Insert p	probe in beaker a	above water. Allo
Instrument	Passed Calibrat	ion.				
In good wo	rking order.					
Name:	Dan Pe	eplinski		Signature:		



Location:		(Cochra	ane WWTP		
		W	ork	Order #:		
nstrument: _			pН	3 SensION +		
OCWA ID:			Se	erial #:	615107	
Start Day/Tim of Workers:	ne: 09 / 03 / 21 DD/MM/YY 1	(a) 12:45 24hour clock		nd Day/Tim otal Man Ho	e: 09 / 03 / 21 DD/MM/YY DURS: 1/4	(a) 13:00 . 24hour clock
Type of Wo ✓ Scheduled M	Iaintenance	Correctiv	e Wo	rk Order	Other:	
	Transmitter	pH Cl			ity	Other:
	Standard		Foun		As	Left
		Actual Value		% Accuracy	Actual Value	% Accuracy
рН	4.00	4.01			3.99	99.75%
pH	7.00	6.87			7.01	99.71%
pH	10.00	9.99			10.01	99.20%
Material Us			/ Calcu	alation => ABS(/	(Actual Value/Standa	rd) –1] x 100%)
Quantity	Part				Description	
1	22834				Hach pH 4 Buffer	
1	22835	49			Hach pH 7 Buffer	
1	22836	49		Н	lach pH 10 Buffer	
Comments:						
Name:	Blake Di	ckinson		Signature:		



ocation:			Cochr	ane WWTP		
			Work	Order #:		
nstrument: _		Por	table Di	ssolved Oxygen N	Meter	<u></u>
CWA ID:			_ S	erial #:	16090000392	27
tart Day/Tim of Workers:	e: 06 / 10 / 22 DD/MM/YY 1	@ 12:15 24hour clock		nd Day/Tim otal Man Ho	e: 06 / 10 / 22 DD/MM/YY DURS: 1/4	24hour clock
Type of Wor ✓ Scheduled M		Correct	tive Wo	ork Order	Other:	
Instrument	V -	□pH □	Chlori	ne Turbid	ity ∏Flow [(Other: DO
	See Re					
Input/S	tandard	Actual Value	s Foun	Mark Accuracy	As I Actual Value	_ett
				•		
					11479 1444-141 (1477-1414)	
		% Accura	icy Calc	ulation $=> ABS(/$	(Actual Value/Standard	d) -1] x 100%)
Material Use Quantity	ed: Part #	!			Description	
1	Tarti	1	6r	nm of Distilled w	ater as per calibration	on instructions
						, married to
Comments:				<u> </u>		
	1/4") of water i tabilize. Begin		30 se	conds. Insert p	orobe in beaker al	pove water. Allo
Instrument Pa	assed Calibrati	on.				
In good work	ing order.					
		7				
Name:	Dan Pe	plinski		Signature:		



ocation:	-		Cochr	ane WWTP		
RG #			Vork	Order #:		
strument: _		HACH	ОСМ Т	ransmitter - Conta	act Flow	
CWA ID:			_ S	erial #:	120859005	5176
art Day/Tin	ne: 06 / 10 / 22	@ 11:45	_ E	nd Day/Tim	e: 06 / 10 / 22	@ 12:00 . 24hour clock
	11	24hour clock			ours: 1/4	
Type of Wo ✓Scheduled M		Correcti	ive Wo	ork Order	Other:_	
					ity √ Flow [Other:
			s Foun		A	s Left
				% Accuracy	Actual Value	% Accuracy
28	3 cm	28 cm		100%	28 cm	100%
Material Us	sed:	% Accurac	cy Calc	ulation => ABS(/	Actual Value/Stand	ard) -1] x 100%)
Quantity	Part #	<i>‡</i>			Description	
					····	
					446 600 mm 1 4 6 6 7 7 .	
Comments:						measurement or
	djusted as need		agni c	n water at nun	ie compared to	measurement on
Name:	Dan Pe	plinski		Signature:		



ocation:			Cochr	ane WWTP				
RG #			Work	Order #:				
strument:		HA	CH OC	M Transmitter - E	East			
CWA ID:_			Serial #:			PBD/E4170039		
tart Day/Ti	DD/MM/YY	<u>@</u> 12:30	24hour clock End Day/Tim		e: 06 / 10 / 22 @ 12 : 45			
	s:1				DD/MM/YY 24hour clock ours:1/4			
	ork Order: Maintenance	Correct	ive Wo	ork Order	Other:_			
_	Transmitter See Re			_	ity √ Flow [Other:		
			s Foun		As Left			
		Actual Value		% Accuracy		% Accuracy		
	9.5cm	9.5cm		100%	9.5cm	100%		
			-		1			
Material U	Tsade	% Accurac	cy Calcı	ulation => ABS(/	(Actual Value/Stando	ard) -1] x 100%)		
	Part #	ŧ			Description			
0						II.		
	- Market				V	***************************************		
Comment	s:							
1	1 point calibration Adjusted as need		eight c	of water at flun	ne compared to	measurement on		
Name:	Dan Pe	olinski		Signature:				



ocation: _			Cochr	ane WWTP			
ORG #		V	Vork	Order #:		2	
nstrument:		HACH O	CM Tra	ansmitter - Effluer	nt Bypass		
OCWA ID:					120859005	5176	
tart Day/T	ime: 06 / 10 / 22	@ 11:45 24hour clock	_ E	nd Day/Tim	e: 06 / 10 / 22	② 12:00 .	
	rs: 1	24nour clock		otal Man Ho		24Hour clock	
	Vork Order: Maintenance	Correctiv	ve Wo	ork Order	Other:_		
_	nt Type: Transmitter See Ro				ity √ Flow [Other:	
	t/Standard		Foun		As Left		
	****	Actual Value		% Accuracy	Actual Value	% Accuracy	
	0.00cm	0.00cm		100%			
	0.000111	0.000111		10070			

	r	% Accuracy	y Calcı	ulation => ABS(/	(Actual Value/Stando	ard) -1] x 100%)	
Material Quantity	U sed: Part ‡	#			Description		
Quantity	1000						
77							
				40			
Comment	·c•			i,			
Performed						measurement on	
Name:	Dan Pe	plinski		Signature:			



ocation:		Cochra	ane WWTP	- 36.96		
RG #	V	Vork	Order #:	***		
strument:	HAC	CH OC	M Transmitter - V	Vest		
CWA ID:		_ S	erial #:	120859005	5177	
art Day/Time: 06 / 10 / 22	(a) 11:15	_ E	nd Day/Tim	e: 06 / 10 / 22	@ 11:30 . 24hour clock	
of Workers: 1	24hour clock		otal Man Ho		24nour clock	
Type of Work Order: ✓ Scheduled Maintenance	Correcti	ve Wo	ork Order	Other:_		
Instrument Type: Recorder Transmitter Calibration: See 1				ity √ Flow [Other:	
Input/Standard		Foun		As Left		
	Actual Value		% Accuracy	Actual Value	% Accuracy	
10.0cm	10.0cm		96.00%	10.0cm	100%	
			APG			
Material Used:	% Accurac	ey Calcu	lation => ABS(/	(Actual Value/Stand	ard) -1] x 100%)	
Quantity Par	t #			Description	Mary Mary	
C						
Comments: Performed 1 point calibrati	on Measured be	iaht o	of water at fluin	ne compared to	measurement or	
flowmeter. Adjusted as ne		ngine o	water at har	no comparca to	modeda om on on	
Name: Dan F	Peplinski		Signature:			



ocation: _	cation: Cochrane WWTP						
PRG #			Work Order #:				
nstrument:	-	р	H Port	able SenSION PH	13		
CWA ID:			Carial #		615107		
	ime: 06 / 10 / 2 DD/MM/YY 1	2 @ 12:15 24hour clock			e: 06 / 10 / 22 DD/MM/YY Durs: 1/4	(a) 12:30 . 24hour clock	
	Ork Order: Maintenance	Correcti	ive Wo	ork Order	Other:		
Instrumer Recorder Calibration	Transmitter	r			ity	Other:	
	t/Standard		s Foun		As Left		
T		Actual Value			Actual Value	% Accuracy	
	pH 4.00	pH 3.95	pH 3.95		pH 4.04	99.0%	
	pH 7.00		pH 6.88		pH 7.08	98.9%	
ŗ	oH 10.00	pH 9.87	pH 9.87		pH 10.09	99.1%	
Material			cy Calc	ulation => ABS(/	(Actual Value/Standa	rd) –1] x 100%)	
Quantity		rt #	Description				
1		3449	Hach pH 4 Buffer				
1		3549	Hach pH 7 Buffer				
1	2283649			H	ach pH 10 Buffer		
Comment	s:		•••••				
Name:	Dan l	Peplinski		Signature:			



ocation:			Cochr	ane WWTP			
RG #	Work Order #:						
CWA ID:_				erial #:	16090000392	27	
-	me: 19 / 12 / 22 DD/MM/YY 1	@ 11:30 24hour clock			e: 19 / 12 / 22 DD/MM/YY DURS: 1/4	24hour clock	
Type of Wo ✓ Scheduled I		Correct	tive Wo	ork Order	Other:		
_	Transmitter			_	ity ∏Flow ✓C	Other: DO	
	1: See Re		calibr s Four		As I	aft	
mput	Standard	Actual Value			Actual Value	% Accuracy	
<u> </u>							
	-						
Material U	sed:	% Accura	ncy Calc	ulation => ABS(/	 (Actual Value/Standard	d) –1] x 100%)	
Quantity	Part #	‡			Description		
1			61	mm of Distilled w	ater as per calibration	on instructions	
			· · · · · · · · · · · · · · · · · · ·	W = 20			
Comments							
	ı (1/4") of water i stabilize. Begin		30 se	conds. Insert p	orobe in beaker al	oove water. Allov	
Instrument I	Passed Calibration	on.					
In good wor	king order.						
Name:	Dan Pe	nlinski		Signature:			