COCHRANE WATER / WASTE WATER SERVICES



2020 ANNUAL REPORT

Reference Index

2020 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;

FLO	ows
Total Flow	595, 286 cubic meters
Average Daily Flow	1, 629 cubic meters
Peak Hydraulic Flow	3, 253 cubic meters

RAW SEWAGE RESULTS

RAW SEWAGE	MONTHLY AVERAGE RESULTS
BOD(5)	110.28 mg/l
TOTAL SUSPENDED SOLIDS	149.91 mg/l
TOTAL PHOSPHORUS	3.96 mg/l
TKN (as N)	49.68 mg/l
AMMONIA & AMMONIA NITROGEN	30.56 mg/l
рН	7.50 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)	4.96 mg/l
TOTAL SUSPENDED SOLIDS	21.56 mg/l
TOTAL PHOSPHORUS	0.24 mg/l
TKN (as N)	8.83 mg/l
AMMONIA	0.27 mg/l
CHLORINE RESIDUAL	0.0 mg/l
NITRITE	0.05 mg/l
NITRATE	17.29 mg/l
CBOD(5)	2.30 mg/l
E.COLI	6,013 CFU/100ml
WAS pH MAINTAINED BETWEEN 6.0-9.5 @ ALL TIMES?	Yes

The total flow in 2020 was 595, 286 cubic meters which represents a 16 % increase from 2019. The total flow in 2020 was 29.12 % of the average day flow design capacity.

The following represents removal efficiencies for the year 2020.

BOD(5)	95.82%					
TOTAL SUSPENDED SOLIDS	86.39%					
TOTAL PHOSPHORUS	92.64%					
TKN (as N)	77.79%					
AMMONIA	98.68%					
AVERAGE REMOVAL EFFICIENCY	90.26%					

The above represents a decrease in overall operating efficiency of 2.2 % over the year 2020.

(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;
 - 1. Replaced water line to ferric room due to water break.
 - 2. Replaced backflow preventer on water line in pump room.
- (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 Hour Meter in Blower Room.
 - 5. Replaced plates on overflow bypass and effluent weir
 - 6. Rebuilt Chlorinator

- 7. Rebuilt flight drive motor for West Clarifier
- 8. Replaced flight drive chain for West Clarifier
- 9. Ultraviolent disinfection was installed at the end of the contact chamber.

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 2020 calibration records for the instrumentation at the Waste Water Treatment Plant. In 2021 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) and Phosphorus Criteria (1.0 mg/l), as specified in Schedule C of the aforementioned certificate of approval. However, we did exceed of Total Suspended Solids (20 mg/L) with an annual average of 21.56 mg/L(SAC report # 6151-BX9Q2J). 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 2020.

(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 2021 should be equal to or less than that of 2020 as the Plant is operating at or close to its maximum efficiency.

SLUDGE VOLUME HAULED

YEAR	SLUDGE AMOUNT HAULED
2016	3050 M3
2017	2484 M3
2018	2685 M3
2019	3504 M3
2020	3161 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;

We have received complaints from customers due to back up in their homes during periods of heavy rain. During these periods our plant was also in overflow.

(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 7 overflows for the year 2020.

DATE	ТҮРЕ	DURATION (hours)	FLOW (m3)
2020/02/12	Overflow	672	28,264
2020/04/04	Overflow	45.7	1,945
2020.04/28	Overflow	117	4,950
2020/05/28	Overflow	8	125
2020/06/23	Overflow	70	5,088
2020/09/29	Overflow	8.75	124
2020/11/11	Overflow	19	1,532

The Overflow events were triggered by spring runoff and heavy rains. All bypass /overflow events have been tested for all specified parameters, as per attached Bypass Summary.

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

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

None

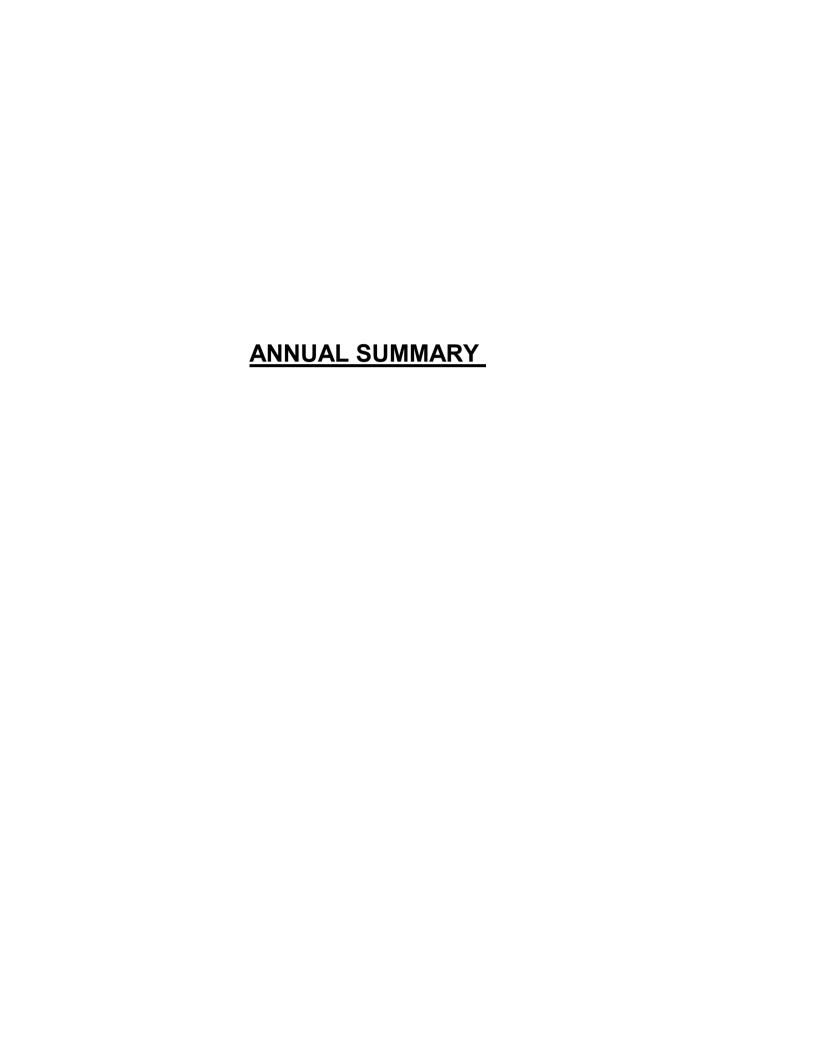
- (m) A summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overflow Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflow with estimated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

This is the report on the Cochrane Waste Water Treatment Plant for the year 2020. 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

Respectfully submitted and reviewed by:

Lynn Chapleau Infrastructure Supervisor



ANNUAL SUMMARY 2020

Municipality: Cochrane (PUC)

Project Name: Cochrane Water Pollution Control Plant

Project Number: **120000355**

Project Location: Cochrane, ON

						r roject Loc	ation.	Oocilialie	, OII								
<u>Month</u>	<u>Parameter</u>	<u>January</u>	<u>February</u>	March	<u>April</u>	May	<u>June</u>	<u>July</u>	August	September	October	November	December	TOTAL	AVERAGE	MAXIMUM	MINIMUM
	Total Flow	22158.91	20908.42	35161.21	92820.41	75375.87	78398.42	52780.59	34099.59	39493.9	48436.27	62637.91	33014.32	595285.82	49607.152	92820.41	20908.42
Influent	Peak Rate	1133	1164	2718	5010	5377	6513	2281	1436	3289	2958	5268.3	1885.2	39032.5	3252.71	6513	1133
Bypass	Plant-Vol.		16040.14	12199.73	1945	5075	5088.8			123.6		1532.375		42004.645	6000.66	16040.14	123.6
	Time - Hrs		420	248	45.7	125	70			8.75		19		936.45	133.78	420	8.75
Raw	Susp. solids	430	510	240	23.8	2	44	148	131	76	64.7	56.7	72.7	1798.9	149.91	510	2
	BOD	230	310	200	25	49	65.5	77.4	74.7	74	74.4	68.5	74.8	1323.3	110.28	310	25
	TKN	91	103	69.1	16.9	61.4	46	31.5	44.3	46.1	30.9	19	37	596.2	49.68	103	16.9
	Phosphorus	8.09	8.39	7.13	0.906	1.35	1.63	4.06	4.71	3.08	3.05	1.91	3.16	47.466	3.96	8.39	0.906
	Ammonia	54.8	63.4	50.6	4.43	6.53	19.6	26.1	40.3	34.5	23.9	13.7	28.8	366.66	30.56	63.4	4.43
	Nitrate	0.05	0.05	0.05	1.92	0.05	0.05	0.19	0.05	0.05	0.05	0.27	0.05	2.83	0.24	1.92	0.05
	Nitrite	0.05	0.05	0.05	0.31	0.05	0.05	0.13	0.05	0.05	0.05	0.05	0.05	0.94	0.08	0.31	0.05
	Phosphate	0.012	15.7	14.4	0.53	0.607	1.5	5.55	8.24	5.34	6.04	3.5	5.8	67.219		15.7	0.012
	pH	7.36	7.41	7.7	7.45	7.73	7.46	7.61	7.64	7.28	7.39	7.52	7.48	90.03	7.50	7.73	7.28
	CBOD	170	260	160	33	56	69.7	68.8	71	6.1	71.5	50	73.6	1089.7	90.81	260	6.1
Effluent	Susp. solids	19.3	67.66667	145	6	4	4.4	0.67	5.3	1.3	0.67	0.67	3.7	258.67667	21.56	145	0.67
	BOD	7	9.3	28	2.7	1.9	1	1.1	1.8	1.7	2.3	1.6	1.1	59.5	4.96	28	1
	Phosphorus	0.1920476	0.5062105	0.4544	0.166		0.1595455		0.2253	0.1897143	0.3066667	0.1457		2.8445724	0.24	0.5062105	0.1113333
	Ammonia	0.1338095	0.1842105		0.18	0.173		0.1109091	0.215	0.1395	1.0733333	0.0425	0.1428571			1.0733333	0.0425
	Nitrate	29.9	31.1	30.9	9.04	9.05	1.7	14.2	22.3	26.6	0.05	13.2	19.4	207.44		31.1	0.05
	Nitrite	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.6		0.05	0.05
	TKN	6.1	10.5	15.8	6.9	12.4	4.8	8.1	4.8	6.5	25.9	3.7	0.5	106	8.83	25.9	0.5
	CBOD	2.4	6.4	7.5	2.2	1.4	1.3	0.9	0.05	1.7	1	1.5	1.3	27.65	2.30	30.9	0.03
	Phosphate	0.372	0.359	30.9	0.229	0.102	0.058	0.079	0.196	0.11	6.36	0.03	0.161	38.956	5.34	39500	0.03
	E.Coli	39500	14750	16500	28	221.5	67.4	29.25	193.75	813	34.5	10	7.6	72155	6012.92	39500	7.6
	Acute Lethality		0			0			0			0		0	0.00	0	0
Date																	
	Air Used																
	Influent Temp	14.290476		12.604545	9.615789	10.72	13.704545	16.245455	16.6	16.295238	14.814286	14.052632	12.47619	164.78916	13.73	16.6	9.615789
	Influent pH	8.0580952	8.2565	8.06	7.75	7.752	7.6954545	7.6513636	7.775	7.9561905	7.7428571	7.784	8.177619	94.65908	7.89	8.2565	
	Aeration Temp.	9.325		10.227273	8.713333	11.47895	14.3	18.24	17.77	15.63333		12.316667				18.24	
	30 Min. S.S.	40.8	33	22.3	31.0625	27.66667	28.1875	28.105263	31.526316	27.33333	35.647059	56	32.388889	394.01753		56	22.3
	D.O. % Level	5.3735	5.0205556	4.9545455	5.58625	6.97	4.2463158	2.9485	4.853	5.2705556	4.6963158	6.3433333	7.935556	64.198427	5.35	7.9355556	2.9485
	Effluent pH	6.7875		6.3409091	7.3875	7.154211	7.2178947	7.186	6.9595	7.28		7.3861111					6.3409091
	Effluent Temp	11.561905	9.51	10.758333	9.229474	11.515	14.463636	18.204545	17.91	15.847619	13.766667	12.47	10.366667	155.60385	12.97	18.204545	9.229474
Plant	Wasting Vol. m3	27743.18	17508.53	41698.52	111607.2	90994.33	91225.846	69840.4	57352.15	68286.231	83076.97	104072.18	52243.95	815649.49		0	0
	Chlorine (Kg)													0			
	Cl Dosage (mg/l)													0		0	0
	Cl Residual(mg/l)	0	0	0.002615	0.000763	0.0041	0	0	0	0	0	0.0009706	0	0.0084376		0.004089	0
	Cl2 in Creek													0	#DIV/0!	0	0
Grit	Hauled (Volume)													0	0.00	0	0
Sludge Hauled	d Liquid Volume	309		745.56		257	418		454.53	254.58	381.87		340.9569	3161.4969			
Loading mg/L	- Phosphorus	0.1372763	0.3649677	0.5153953	0.513606	0.365208	0.4169371	0.40429	0.247827	0.2497519	0.4791545	0.3042114	0.1185676	4.1171928	0.3430994	0.5153953	0.1185676
	BOD	5.0036248	6.705114	31.758512	8.353837	4.619811	2.6132807	1.8728596	1.9799762	2.2379877	3.5936587	3.3406885	1.714759	73.794109	6.1495091	31.758512	1.714759
	Suspended Solids	13.795708	48.786313		18.56408	9.725919	11.498435	1.1407418	5.8299299	1.7114023	1.0468484	1.3989133	3.9404188	281,90243	23.491869	164,46372	1.0468484

PERFORMANCE ASSESSMENT REPORTS

PROJECT NUM.: No. 12000355 DESIGN CAPACITY: 5,600 cu. Meters / day		
ROJECT: Cochrane WPCP WATER COURSE: Lillabelle Lake / Abitibi River ROJECT NUM.: No. 12000355 DESIGN CAPACITY: 5,600 cu. Meters / day		
PROJECT: Cochrane WPCP WATER COURSE: Lillabelle Lake / Abitibi River PROJECT NUM.: No. 12000355 DESIGN CAPACITY: 5,600 cu. Meters / day		
PROJECT NUM.: No. 12000355 DESIGN CAPACITY: 5,600 cu. Meters / day		
DESCRIPTION: Extended Aeration		
MONTH FLOWS BIOCHEMICAL O2 DEMAND SUSPENDED SOLIDS PHOSPHORUS DISINFI		CAUSTIC
TOTAL AVG DAY MAX DAY AVG RAW AVG EFF LOADING PERCENT AVG RAW AVG EFF LOADING PERCENT AVG RAW AVG EFF LOADING PERCENT AVG		AVG KG.S
FLOW FLOW BOD BOD BOD REMOVAL SS SS REMOVAL PHOS. PHOS. REMOVAL CL2 RES		DOSE USED
1000M3 1000M3 1000M3 (mg/L) (m		(mg/L)
JAN 22.16 0.714 1.133 230.0 7.00 5.00 97.0 430.0 19.30 13.78 95.5 8.1 0.19 0.14 97.6 0.0000 FEB 20.91 0.721 1.164 310.0 9.30 6.71 97.0 510.0 67.67 48.79 86.7 8.4 0.51 0.36 94.0 0.0000		
FEB 20.91 0.721 1.164 310.0 9.30 6.71 97.0 510.0 67.67 48.79 86.7 8.4 0.51 0.36 94.0 0.0000 MAR 35.16 1.134 2.718 200.0 28.00 31.75 86.0 240.0 145.00 164.43 39.6 7.1 0.45 0.52 93.6 0.0026		
MAR 35.16 1.134 2.718 200.0 28.00 31.73 86.0 240.0 145.00 164.43 39.0 7.1 0.43 0.52 95.0 0.0026 APR 92.82 3.094 5.010 23.0 2.70 8.35 88.3 23.8 6.00 18.56 74.8 0.9 0.17 0.51 81.7 0.0008		
MAY 75.38 2.431 5.377 49.0 1.90 4.62 96.1 4.0 2.00 4.86 50.0 1.4 0.10 0.24 92.6 0.0041		
JUN 78.40 2.613 6.513 65.5 1.00 2.61 98.5 44.0 4.40 11.50 90.0 1.6 0.16 0.42 90.2 0.0000		
JUL 52.78 1.702 2.281 77.4 1.10 1.87 98.6 148.0 0.67 1.14 99.5 4.1 0.24 0.40 94.2 0.0000		
AUG 34.10 1.100 1.436 74.7 1.80 1.98 97.6 131.0 5.30 5.83 96.0 4.7 0.23 0.25 95.2 0.0000		
SEP 39.49 1.316 3.289 74.0 1.70 2.24 97.7 76.0 1.30 1.71 98.3 3.1 0.19 0.25 93.8 0.0000		
OCT 48.44 1.562 2.958 74.4 2.30 3.59 96.9 64.7 0.67 1.05 99.0 3.1 0.31 0.48 89.9 0.0000		
NOV 62.64 2.088 5.268 68.5 1.60 3.34 97.7 56.7 0.67 1.40 98.8 1.9 0.15 0.30 92.4 0.0010		
DEC 33.01 1.065 1.885 74.8 1.10 1.17 98.5 72.7 3.70 3.94 94.9 3.2 0.11 0.12 96.5 0.0000		
OTAL 595.284 67.7 . 100.0		
AVG 1.628 110.1 4.96 95.82 145.0 21.39 86.39 4.0 0.23 92.64 0.0007	l	#DIV/0! #DIV/0!
MAX 6.513 100.0 28.00 6.0 145.00 8.4 0.51 0.0041	0.00	0.0 0.00
CRITERIA 5.600 11.500 20.00 230.00 4.0 20.00 230.00 1.00		
2005/0005		
COMPLIANCE YES YES NO YES		
COMMENTS:		

				SEWAG	E PERFORI	MANCE ASS	SESSMENT	REPORT						
MUNICIDAL	ITV.	TOWN OF	COCUDANE					VEAD.		0000				
MUNICIPAL PROJECT:		COCHRANI						YEAR: WATER CO	LIDOE.	2020	E LAVE / ADITIDI DIVI	ED.		
WORKS NU	1	12000355	E WPCP					DESIGN CA				AKE / ABITIBI RIVER		
WORKS NO	JWBEK:	12000355						DESIGN CA	APACITY:	5,600 cu. m	eters/day			
DESCRIPT	ION:	Extended A	Aeration											
MONTH														
		NITRATE EFFLUENT	NITRITE INFLUENT	NITRITE EFFLUENT	AMMONIA INFLUENT				TKN EFFLUENT	PERCENT REMOVAL	PHOSPHATE RAW ¹	PHOSPHATE EFFLUENT ²	PERCENT REMOVAL	
	(mg/l)	(mg/l)	(mg/l)	(mg/L)	(mg/L)	(mg/l)		(mg/L)	(mg/l)		(mg/L)	(mg/l)	7	
JAN	0.05			0.05			99.76		6.10	93.30	0.01	0.37	-3000.00	
FEB	0.05		0.05	0.05		0.18			10.50	89.81	15.70	0.36		
MAR	0.05			0.05	50.60				15.80	77.13	14.40	30.90		
APR	1.92	9.04	0.31	0.05		0.18	95.94	16.90	6.90	59.17	0.53	0.23		
MAY	0.05	9.05	0.05	0.05	6.53	0.17	97.35	61.40	12.40	79.80	0.61	0.10	83.20	
JUN	0.05	1.70	0.05	0.05	19.60	0.09	99.55	46.00	4.80	89.57	1.50	0.06	96.13	
JUL	0.19	14.20	0.01	0.05	26.10	0.11	99.58	31.50	8.10	74.29	5.55	0.08	98.58	
AUG	0.05	22.30	0.05	0.05	40.30	0.22	99.47	44.30	4.80	89.16	8.24	0.20	97.62	
SEPT	0.05	26.60	0.05	0.05	34.50	0.14	99.60	46.10	6.50	85.90	5.34	0.11	97.94	
OCT	0.05	0.05	0.05	0.05	23.90	1.07	95.51	30.90	25.90	16.18	6.04	6.36	-5.30	
NOV	0.27	13.20	0.05	0.05		0.04	99.69		3.70		3.50		99.14	
DEC	0.05	19.40	0.05	0.05	28.80	0.14	99.51	37.00	0.50	98.65	5.80	0.16	97.24	
TOTAL														
AVG	0.10	17.29		0.05	30.56	0.27	98.68	49.68	8.83	77.79	5.60	3.25	-191.29	
MAX														
CRITERIA														
COMMENT	5 :													

BYPASS SUMMARY NOTIFICATION AND LAB RESULTS

	Occinance made	alci ilcalilic	ill Flaill			YEAR:	2020					
								Sample	Results			
Location	Type (PB/SB/STPO /CSO/SSO/STWO)	Start Time	Duration (hours)	Volume (m3)	M/E	Disinfection (Y/N)	Treatment (Y/N)	Reason Code*	BOD5 (mg/L)	SS (mg/L)	TP (mg/L)	E.Coli (/100ml
STP	SB	8:45	672	28264	М	N	N	4		119.25	2.57	27500
STP	STPO	16:30	45.7	1,945	E	N	N	2	12.516667	58.583333	0.9251667	200000
STP	STPO	16:30	117	4950	Е	N	N	2	10.91	71	0.78	
STP	STPO	11:20	8	125	Е	N	N	2	10.18	177.75	0.615	200000
STP	STPO	11:45	70	5,088	Е	N	N	1	10.59	137.3	1.07	139300
STP	STPO	1:05	8.75	123.6	Е	N	N	1	11.55	149.5	1.55	163500
STP	STPO	8:00	19	1532.375	Е	N	N	1	11.325	122.7	0.6576	111910
1					No 2 = Spring Runoff 3 = Infiltration				6 = Process Upsets 7 = Power Outages 8 = Unknown 9 = Other, please comment below.			
	STP STP STP STP STP STP STP STP STP	STP SB STP STPO	STP SB 8:45	STP SB 8:45 672	ICSO/SSO/STWO)	CSO/SSO/STWO) (hours) (m3)	I/CSO/SSO/STWO (hours) (m3) (Y/N)	CSO/SSO/STWO (hours) (m3) (Y/N) (Y/N)	CSO/SSO/STWO (hours) (m3) (Y/N) (Y/N) Code*	CSO/SSO/STWO)	Duration	Location Type (PB/SB/STPO Start Time Curation (nours) (m3) (m/s) (m/s) (m/s) (m/s) (m/s) (m/s) (mg/s) (mg/s)

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: Feb 12 2020 Time of Call: 1017 (m./p.m.)
Reference #: 3726 Person Who Called: Liam /
Office Called: MoH Sandra Reported By: Tyler Cheff
Bypass: Spill: Leak: Overflow:
Location of Incident: Lochrane STP
Time of Incident: 0845 Cm./p.m. Receiver: Lilabelle Creck Details of Incident: Planned oypass maintenance / upgrades
Details of Incident: Manned oxpass maintenance / upgrades
@ Plant
Downstream Users:
Possible Effects on Receiver, Environment or Downstream Users:
NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 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: end of planned
Termination of Incident
Date: 03/11/20 Time of Call 10,15 Person Contacted: 10/2/8
Time of Termination: 1400 Approximate Volume: 28264 Cu. Meters
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Market Market Market September 1998 Se



Client:

Melissa Hoogenhoud

Company:

Town of Cochrane - Wastewater

Address:

171 Fourth Ave, Box 490

Cochrane, ON, P0L 1C0

Phone/Fax:

(705) 272-4232 / (705) 272-2634

Email: Date Order Received: Melissa.Hoogenhoud@cochraneontario.com

2/19/2020

6°C

Arrival Temperature:

Work Order Number:

394147

PO#:

9184

Regulation:

Sampled By:

Information not provided Weekly WWTP

Project #:

DWS #:

Chris Crawford

Analysis Started:

2/19/2020

Analysis Completed:

2/25/2020

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
Discharge Effluent (Grab)	1517 01 4	Wastewater	Grab		2/19/2020	8:31 AM
Planned Bypass	1517015	Wastewater	Grab		2/19/2020	8:32 AM

METHODS AND INSTRUMENTATION

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

Method Lab		Description	Reference
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
KL-CBOD5 (K3)	Kirkland Lake	Determination of 5-Day Carbonaceous Biological Oxygen Demand (cBOD5)	Modified from APHA-5210B
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode	Modified from APHA-4500H+ B
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

REPORT COMMENTS

Bacti lot #N/A



Town of Cochrane - Wastewater

Work Order Number: 394147

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 394147

WORK ORDER RESULTS

Date of Issue: 02/25/2020 16:09

Sample Description Sample Date	Planned 2/19/2020	Bypass 0 8:32 AM				
Lab ID	1517	7015				
General Chemistry	Result	MDL	Units			
рН	6.13	N/A	pН			
Total Phosphorus (as P)	1.27	0,02	mg/L			
Sample Description	Discharge Et	fluent (Grab)				
Sample Date	2/19/2020	8:31 AM				
Lab ID	1517	1517014				
Microbiology	Result	MDL	Units			
Escherichia coli	4000 [6000]	1000	CFU/100mL			
Sample Description	Planned	Bypass				
Sample Date	2/19/2020	8:32 AM				
Lab ID	1517	7015				
Oxygen Demend	Result	MDL	Units			
Carbonaceous BOD	7.6	2.4	mg/L			
Sample Description	Planned	Bypass				
Sample Date	2/19/2020	2/19/2020 8:32 AM				
Lab ID	1517	7015				
Solids	Result	MDL	Units			
Total Suspended Solids	62	4	mg/L			



Town of Cochrane - Wastewater

Work Order Number: 394147

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number, Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES. Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(i)fluoranthene.

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.



Client: Melissa Hoogenhoud Work Order Number: 394514 Company: Town of Cochrane - Wastewater PO#: 9184 Address: 171 Fourth Ave. Box 490 Regulation: Information not provided Cochrane, ON, P0L 1C0 Project #: Weekly WWTP (705) 272-4232 / (705) 272-2634 Phone/Fax: DWS #: Email: Melissa.Hoogenhoud@cochraneontario.com Sampled By: Rob McNabb 2/25/2020 Date Order Received: Analysis Started: 2/26/2020 Arrival Temperature: 7°C Analysis Completed: 3/4/2020

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
Discharge Effluent (Grab)	1518190	Wastewater	Grab		2/25/2020	8:40 AM
Planned Bypass	1518191	Wastewater	Grab		2/25/2020	8:40 AM

METHODS AND INSTRUMENTATION

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

Method Leb		Description	Reference	
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	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	
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	

REPORT COMMENTS

Bacti lot # N/A



Town of Cochrane - Wastewater

Work Order Number: 394514

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director

Date of Issue: 03/04/2020 15:05



Town of Cochrane - Wastewater

Work Order Number: 394514

WORK ORDER RESULTS

Date of Issue: 03/04/2020 15:05

Sample Description	Planned		
Sample Date	2/25/2020) 8:40 AM	
Lab ID	1518		
General Chemistry	Result	MDL	Units
рН	6.45	N/A	рН
Total Phosphorus (as P)	2.64 [2.55]	0.02	mg/L
Sample Description	Discharge Ef	fluent (Grab)	
Sample Date	2/25/2020	8:40 AM	
Lab ID	1518	3190	
Microbiology	Result	MDL	Units
Escherichia coli	22000 [26000]	1000	CFU/100mL
Sample Description	Planned	Bypass	
Sample Date	2/25/2020	8:40 AM	
Lab ID	1518	3191	
Oxygen Demand	Result	MDL	Units
Carbonaceous BOD	10.6	<u>/1</u>	mg/L



Town of Cochrane - Wastewater

Work Order Number: 394514

Sample Description	Planned	Planned Bypass			
Sample Date	2/25/2020	8:40 AM			
Lab ID	1518	3191			
Solids	Result	MDL	Units		
Total Suspended Solids	125	5	mg/L		

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 03/04/2020 15:05

[]: 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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT, CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene,

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.



Supersedes report printed: 03/11/2020 09:02

Date Order Received: Arrival Temperature:	3/3/2020 12 °C	Analysis Started: Analysis Completed:	3/4/2020 3/17/2020
Phone/Fax; Email:	(705) 272-4232 / (705) 272-2634 Melissa.Hoogenhoud@cochraneontario.com	DWS #: Sampled By:	Tyler Cheff
	Cochrane, ON, P0L 1C0	Project #:	Monthly WWTP
Address:	171 Fourth Ave, Box 490	PO #: Regulation:	9184 Information not provided
Client: Company:	Melissa Hoogenhoud Town of Cochrane - Wastewater	Work Order Number:	395030

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
Influent	1519802	Wastewater	Grab		3/3/2020	9:00 AM
Discharge Effluent	1519803	Wastewater	Grab		3/3/2020	8:35 AM
Glackmeyer Lagoon	1519804	Wastewater	Grab		3/3/2020	8:45 AM

METHODS AND INSTRUMENTATION

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

Method	Leb	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)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
E _s coli by MF on mFC-BCIG (A10)	Timmins	Determination of E _c 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
Phosphate /W (A23.1)	Kirkland Lake	Determination of Ortho-Phosphate in Water.	Modified from EPA 365.3 and ESS 310.2.
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,



Supersedes report printed: 03/11/2020 09:02

Town of Cochrane - Wastewater

Work Order Number: 395030

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

REPORT COMMENTS

* REVISED report to correct data entry error affecting E.coli result. 03/18/20 HH

This report has been approved by:

Madhavi Purohit, M.Sc.

Laboratory Director



Supersedes report printed: 03/11/2020 09:02

Town of Cochrane - Wastewater

Work Order Number: 395030

WORK ORDER RESULTS

Date of Issue: 03/18/2020 10:42

Sample Description	Infik	Influent Discharge Effluent 3/3/2020 9:00 AM 3/3/2020 8:35 AM		e Effluent	Glackmeyer Lagoon 3/3/2020 8:45 AM		
Sample Date	3/3/2020			8:35 AM			
Lab ID	1519802		1519	1519803		1519804	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0.05	30.90	0.05	<0.05	0.05	mg/L
Nitrite (as N)	<0.05	0.05	<0.05	0.05	< 0.05	0.05	mg/L
Phosphate	14.40	0.02	2,280	0.006	9.66	0.02	mg/L
Sample Description	Influ	Jent	Discharge	e Effluent	Glackmey	er Lagoon	
Sample Date	3/3/2020	9:00 AM	3/3/2020 8:35 AM		3/3/2020 8:45 AM		
Leb ID	1519802		1519803		1519804		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	50.6	0.4	0.64	0.01	31.2	0.4	mg/L
рН	7.7	N/A					рН
Total Kjeldahl Nitrogen	69.1 [69.9]	0.8	15.8	0.4	37.6	0.4	mg/L
Total Phosphorus (as P)	7.13	0.04	2,71	0.02	5.37	0.04	mg/L
Sample Description	Discharge	e Effluent					
Sample Date	3/3/2020	8:35 AM					
Lab ID	1519	9803					
Microbiology	Result	MDL	Units				
Escherichìa coli	33000 [28000]	1000	CFU/100mL				



Supersedes report printed: 03/11/2020 09:02

Town of Cochrane - Wastewater

Sample Description	Influ	uent	Discharg	e Effluent	Glackmey	ver Lagoon	
Sample Date	3/3/2020	3/3/2020 9:00 AM		8:35 AM	3/3/2020	8:45 AM	
Lab ID	1519	9802	1519	9803	151:	9804	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	200	30	28	3	150	30	mg/L.
Carbonaceous BOD	160	30	9,9	3	150	30	mg/L
Sample Description	influ	uent	Discharge Effluent		Glackmeyer Lagoon		
Sample Date	3/3/2020	9:00 AM	3/3/2020 8:35 AM		3/3/2020 8:45 AM		
Lab ID	1519802		1519803		1519804		
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	240	5	120.0	6.7	123	5	mg/L

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES. Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.

Work Order Number: 395030



Client:

Melissa Hoogenhoud

Company:

Town of Cochrane - Wastewater

Address:

Email:

171 Fourth Ave, Box 490

Cochrane, ON, P0L 1C0

Phone/Fax:

(705) 272-4232 / (705) 272-2634

Melissa.Hoogenhoud@cochraneontario.com

Date Order Received:

3/10/2020 5°C Arrival Temperature:

PO#:

395519 9184

Regulation:

Information not provided Weekly WWTP

Project #: DWS #:

Sampled By:

Mike Nelson

Analysis Started:

Work Order Number:

3/11/2020

Analysis Completed:

3/17/2020

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
Discharge Effluent (Grab)	1521449	Wastewater	Grab		3/10/2020	8:21 AM
Planned Bypass	1521450	Wastewater	Grab		3/10/2020	8:25 AM

METHODS AND INSTRUMENTATION

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

Method	Lab	Description	Reference
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
E.coli by MF on mFC-BCIG (A10)	Timmins	Determination of E _s 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
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

REPORT COMMENTS

Bacti lot # N/A



Town of Cochrane - Wastewater

Work Order Number: 395519

This report has been approved by:

Date of Issue: 03/17/2020 15:24

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater

Work Order Number: 395519

WORK ORDER RESULTS

Date of Issue: 03/17/2020 15:24

Sample Description	Planned			
Sample Data	3/10/2020			
Lab ID	1521			
General Chemistry	Result	Units		
рН	5.9	N/A	рН	
Total Phosphorus (as P)	3.65 [3.61]	mg/L		
Sample Description	Discharge Effluent (Grab)			
Sample Date	3/10/2020 8:21 AM			
LebID	1521449			
Microbiology	Result	MDL	Units	
Escherichia coli	44000 [45000]	1000	CFU/100mL	
Sample Description	Planned Bypass			
Sample Date	3/10/2020 8:25 AM			
Lab ID	1521450			
Oxygen Demand	Result MDL		Units	
Carbonaceous BOD	5.1	0.5	mg/L	



Town of Cochrane - Wastewater

 Sample Description
 Planned Bypass

 Sample Date
 3/10/2020 8:25 AM

 Leb ID
 1521450

 Solids
 Result
 MDL
 Units

 Total Suspended Solids
 170 (165)
 10 mg/L

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 03/17/2020 15:24

[]: 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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT, CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.

Work Order Number: 395519

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

is official and the state of th
Date: Aril 4/2020 Time of Call: 1700 a.m. (b.m.
Reference #: 904281 Person Who Called: Brenda Capica is t
Office Called: SAC @ 1705 Reported By: Robins Nath 1718 MOH Left message of Destroffice Bypass: Spill: Leak: Overflow:
Bypass: Spill: Leak: Overflow:
Location of Incident: Cochrene STP
Time of Incident: 1630 a.m./pm. Receiver: Lilabelle Creek
Details of Incident: Spring melt
Downstream Users: No Ne
Possible Effects on Receiver, Environment or Downstream Users:
NOTE: Take 2 Raw Sewage Samples Per Incident & Have them Tested For every 8 hours during the overflow: 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 6/20 Time of Call: 1131 Person Contacted: FATIMA TABLES April 6/20 1136 MOH LEANNER Cu Meters
Time of Termination. 1440 Approximate Volume: 1945 Cu. Meters DURATION 45 1/25. 40 MIN 5
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Allow Moke 1500 SForm.014.Bypa.2013



Client: Melissa Hoogenhoud Work Order Number: 397037 Town of Cochrane - Wastewater PO#: Company: 171 Fourth Ave, Box 490 Address: Regulation: None Cochrane, ON, P0L 1C0 Project #: Lagoon Overflow Phone/Fax: (705) 272-4232 / (705) 272-2634 DWS#: Melissa.Hoogenhoud@cochraneontario.com Email: Sampled By: Rob McNabb Date Order Received: 4/6/2020 Analysis Started: 4/9/2020 15 °C Arrival Temperature: Analysis Completed: 4/13/2020

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
Bypass Sample	1526700	Wastewater	Grab		4/4/2020	5:00 PM
Bypass	1526701	Wastewater	Grab		4/5/2020	1:00 AM
Bypass	1526702	Wastewater	Grab		4/5/2020	9:00 AM
Bypass	1526703	Wastewater	Grab		4/5/2020	5:00 PM
Bypass Sample	1526704	Wastewater	Grab		4/5/2020	11:00 PM
Bypass Sample	1526705	Wastewater	Grab		4/6/2020	7:00 AM

METHODS AND INSTRUMENTATION

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

Method	Lab	Description	Reference
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
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: 397037

This report has been approved by:

Date of Issue: 04/14/2020 16:16

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 397037

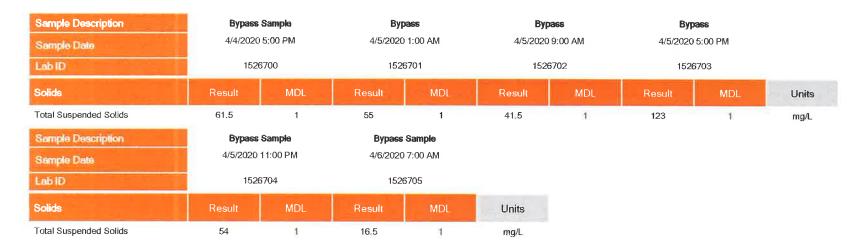
WORK ORDER RESULTS

Date of Issue: 04/14/2020 16:16

Sample Description Sample Date	Bypass 4/4/2020	•	Byp 4/5/2020			pass 0 9:00 AM	Вур 4/5/2020		
Lab ID	1526	700	1526	3701	1526702		1526703		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Phosphorus (as P)	1.06	0.02	0,585	0.002	1.230	0.006	1,49	0.01	mg/L
Sample Description Sample Date	Bypass Sample 4/5/2020 11:00 PM		Bypass 4/6/2020	•					
Lab ID	1526	704	1526	6705					
General Chemistry	Result	MDL	Result	MDL	Units				
Total Phosphorus (as P)	0,692	0.002	0.494	0.002	mg/L				
Sample Description	Bypass 4/4/2020	•	Byp 4/5/2020			pass 0 9:00 AM	Byp 4/5/2020		
Lab ID	1526	700	1526	3701	152	6702	1526	703	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	12.1	1	14.4	1	12.2	1	13.6	1	mg/L
Carbonaceous BOD	12.9	1	13.6	1	13.4	1	13.2	(1)	mg/L
Sample Description	Bypass	Sample	Bypass	Sample					
Sample Date	4/5/2020	11:00 PM	4/6/2020	7:00 AM					
Lab ID	1526	704	1526	705					
Oxygen Demand	Result	MDL	Result	MDL	Units				
BOD (5 day)	12,2	1	10,6	1	mg/L				
Carbonaceous BOD	7.6	, 4	8.4	1	mg/L				



Town of Cochrane - Wastewater Work Order Number: 397037



LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 04/14/2020 16:16

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

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES,

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.



Client: Melissa Hoogenhoud Work Order Number: 397223

Company: Town of Cochrane - Wastewater PO #:

171 Fourth Ave, Box 490 Regulation: Information not provided

Cochrane, ON, P0L 1C0 Project #: (705) 272-4232 / (705) 272-2634 DWS #:

Email: Melissa.Hoogenhoud@cochraneontario.com Sampled By: Aaron Morrison

Date Order Received: 4/7/2020 Analysis Started: 4/7/2020

Arrival Temperature: 10 °C Analysis Completed: 4/15/2020

WORK ORDER SUMMARY

Address:

Phone/Fax:

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
#8 Overflow Stn	1527291	Wastewater	Grab		4/6/2020	2:40 PM

METHODS AND INSTRUMENTATION

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

Method	Leb	Description	Reference
Ammonia Water (A42)	Timmins	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	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
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
Un-Ionized NH3 (A42.4)	Timmins	Calculation of Un-Ionized Ammonia	Modified from APHA-4500

REPORT COMMENTS

Unionized ammonia calculated using lab pH and received temperature.



Town of Cochrane - Wastewater

Work Order Number: 397223

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



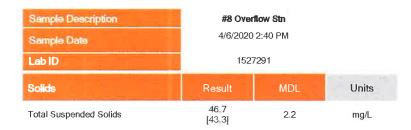
Town of Cochrane - Wastewater Work Order Number: 397223

WORK ORDER RESULTS

Sample Description	#8 Over		
Sample Date	4/6/2020	2:40 PM	
Lab ID	1527	7291	
General Chemistry	Result	MDL	Units
Ammonia (as N)	4.63	0.01	mg/L
рН	7.35	N/A	рН
Total Phosphorus (as P)	1,300	0.006	mg/L
Un-Ionized Ammonia (Calc.)	0.019	0.002	mg/L
Sample Description Sample Date Lab ID	#8 Over 4/6/2020 1527	٠	
Microbiology	Result	MDL	Units
Escherichia coli	>200000	1000	CFU/100mL
Sample Description Sample Date Lab ID	#8 Over 4/6/2020 1527		
Oxygen Demand	Result	MDL	Units



Town of Cochrane - Wastewater Work Order Number: 397223



LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number, Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 04/15/2020 16:42

[]: 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,

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT, CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.

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: April 28 2020	Fime of Call: 1707 a.m./6.m.
Reference #: 904318 F	Person Who Called: Nic Lymes
Office Called: SAC Reported MOH @ 1707 Jeffmessupp. Bypass: Spill: Leak:_	d By: Rob McNako Overflow:
Location of Incident: Cochrane STF	2
Time of Incident: 1630 a.m.(p.m). Receiver:	Lilabelle creek
Details of Incident: Spring melt	
Downstream Users: NONE	
Possible Effects on Receiver, Environment or Downs	stream Users: NO
NOTE: Take 2 Raw Sewage Samples Per Incident & the overflow: 1. 5-day BOD and CBOD, Suspended Solids, placeholder Addition Calls Town Hall: Phone No. 272-4361 Fax No. 272-	H, TKN and Total phosphorus
Details of Call:	
Termination of Incident	
Time of Termination: 1400 Approximate V	on Contacted: JULIA- 2 1058 Zerviu 4 Volume: 4950 Cu. Meters
Current Status: Chlorinating? Yes: No:	Explain:
Further Action Required:	*
Reported By: First Call to SAC was confused on	Sing the operatorfor SAR ask how are bypass is working.

Date Time		Received at Testmark By		Time	Date	9	1	Récéived By
Shipping Reference		By	Shipped By	Time ひつつ	L Date AMIC 28/20	houses		Sampled By
Date Time		Relinquished to Testmark By (Signature)	Relinqui		Red mysiell.	(CNAD)3	7	R
	Municipality:	Sewer Use: ☐Sanitary ☐Storm Mu☐Other:				COMMENTS/FIELD NOTES:	EN IS/FIE	COMP
☐Subsurface ER ☐EEM ☐None	☐ CofA ☐ MMER	~	GULAT		ected	☐ High Concentrations Expected	High Conc	
9 ☐) al / Parkland ☐ Agricultural	# □	☐ 3 ☐ 4 ☐ 5 commercial		e,	**Matrix: B=Biota, GW=Ground Water, O=Oii, P=Paint, S=Soii, SL=Sludge, SW=Surface Water, W=Water, WW=Wastewater, SD=Sediment	ta, GW=Groun ter, W=Water,	rix: B=Bio urface Wa	SW=S
	320							
							3	
	326							
	1							
	200							
								1
	W/A	$\times x $	NZIX	3	1. 1 43		10/30 0700	by be
		XX	XXX	3	27 11 11 11	<u>り</u> とう		OH Da
		× ×	× ×	ω	Sewage Plant Overflow $ oldsymbol{\pm} oldsymbol{2} oldsymbol{2} oldsymbol{3} oldsymbol{4} oldsymbol{5} oldsymbol{6} oldsymbol{6} oldsymbol{7} oldsy$	C ww	tha 1630	OH/B Rho
Temp Btl. Type Lab ID	FIEL Met (Y/N	pH TKI	BO TSS	Nu	(This Will Appear On The Report)	MATRIX**	TIME	DATE (mm-dd
	D TE			MBE	SAMPLE DESCRIPTION	ING		
	EMP FI	- /ifi	, C	R O	* Prior arrangements must be made for	ose □Return	d □Dispose	□Hold
	(if a	ann	во	F C	SPECIFIC DATE:	ISPOSAL	SAMPLE DISPOSAL	
	FILTE	ilicable	D5	IATMC	□3 Business Days □Standard	EPORTED No	QC DATA REPORTED	□Yes
WORK ORDER NUMBER:	ble)			NERS		ii	< ☑Email	□Fax
LABORATORY USE ONLY	?	ANALYSIS REQUESTED			GND	REPORTING/INVOICING FORMAT	TING/INVC	REPOR
		Fax:		Phone:	Fax: 705-272-2634	705-272-5067		Phone:
				Email:	melissa.hoogenhoud@cochraneontario.com	.hoogenhoud@	melissa	Email:
Bypass				Contact:		Melissa Hoogenhoud		Contact:
Client Project #	Clic				1C0	Cochrane, ON POL 1C0	Cochra	
Client P.O. #	Clie			Address:	x 490	Address: 171 4th Avenue, Box 490	s: 171 4t	Addres
TM Quote #:	NT.			Client	Town of Cochrane - Wastewater	of Cochrane	Town	Client:
PROJECT INFORMATION:	PR	INVOICE TO: (if different from Report)	CE TO: (if di	INVOIC			REPORT TO:	REPO
mples	nking water sa	istody Form for regulated drinking water samples	Chain of Cu	Water	Please use our Drinking Water Chain of Custody Form			

7 Margaret Street, Garson, ON, P3L 1E1 • 705-693-1121 (P) • 705-693-1124 (F) • customer.service@testmark.ca
100 Wilson Ave., Timmins, ON, P4N 2S9 • 705-531-1121 (P) • 705-531-1125 (F) • timmins@testmark.ca
6820 Kitimat Road Unit #1, Mississauga, ON, L5N 5M3 • 905-821-1112 (P) • 905-821-2095 (F) • mississauga@testmark.ca



Client: Company:	Melissa Hoogenhoud Town of Cochrane - Wastewater	Work Order Number: PO #:	398830
Address:	171 Fourth Ave, Box 490 Cochrane, ON, P0L 1C0	Regulation:	Information not provided
Phone/Fax:	(705) 272-4232 / (705) 272-2634	Project #: DWS #:	Bypass
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Rob McNabb
Date Order Received: Arrival Temperature:	4/29/2020 10 °C	Analysis Started: Analysis Completed:	4/30/2020 5/6/2020

WORK ORDER SUMMARY

Date of Issue: 05/06/2020 16:38

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 Over Flow #1	1532498	Wastewater	Grab		4/28/2020	4:30 PM
Sewage Plant Over Flow #2	1532499	Wastewater	Grab		4/28/2020	11:30 PM
Sewage Plant Over Flow #3	1532500	Wastewater	Grab		4/29/2020	7:00 AM

METHODS AND INSTRUMENTATION

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

Method	Lab	Description	Reference
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
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: 398830

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 398830

WORK ORDER RESULTS

Date of Issue: 05/06/2020 16:38

Sample Description	Sewage Plan	t Over Flow #1	Sewage Plant	Over Flow #2	Sewage Plant	Over Flow #3	
Sample Date	4/28/202	0 4:30 PM	4/28/2020	11:30 PM	4/29/2020	7:00 AM	
Lab ID	153	2498	1532	2499	1532500		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
рН	7.34	N/A	7.36	N/A	7,55	N/A	рН
Total Kjeldahl Nitrogen	12.3	0.4	14.0	0.4	11.7	0.4	mg/L
Total Phosphorus (as P)	1.14	0.02	0.887	0.002	0.933	0.002	mg/L
Sample Description	Sewage Plant	t Over Flow #1	Sewage Plant	Over Flow #2	Sewage Plant	Over Flow #3	
Sample Date	4/28/2020	0 4:30 PM	4/28/2020	4/28/2020 11:30 PM		4/29/2020 7:00 AM	
Leb ID	1532498		1532499		1532500		
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	11,3	1	11.9	1	11.6	1	mg/L
Carbonaceous BOD	12.3	1	11.9	1	7.9	1	mg/L
Sample Description	Sewage Plant	t Over Flow #1	Sewage Plant Over Flow #2		Sewage Plant Over Flow #3		
Sample Date	4/28/2020	0 4:30 PM	4/28/2020	11:30 PM	4/29/2020	7:00 AM	
Leb ID	153:	2498	1532	2499	1532500		
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Condo							Ottillo



Town of Cochrane - Wastewater Work Order Number: 398830

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 05/06/2020 16:38

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

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.



Client:	Melissa Hoogenhoud	Work Order Number:	398916
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
	Cochrane, ON, P0L 1C0	Project #:	Bypass
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Rob McNabb
Date Order Received:	4/30/2020	Analysis Started:	4/30/2020
Arrival Temperature:	9 °C	Analysis Completed:	5/6/2020

WORK ORDER SUMMARY

Date of Issue: 05/06/2020 16:38

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 Over Flow #1	1532775	Wastewater	Grab		4/29/2020	3:00 PM
Sewage Plant Over Flow #2	1532776	Wastewater	Grab		4/29/2020	11:00 PM
Sewage Plant Over Flow #3	1532777	Wastewater	Grab		4/29/2020	7:00 AM

METHODS AND INSTRUMENTATION

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

Method	Lab	Description	Reference
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
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: 398916

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 398916

WORK ORDER RESULTS

Sample Description	Sewage Plant	Over Flow #1	Sewage Plant	Over Flow #2	Sewage Plant	Over Flow #3	
Sample Date	4/29/2020	3:00 PM	4/29/2020	11:00 PM	4/29/2020	7:00 AM	
Lab ID	153:	2775	1532	2776	1532	2777	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
рН	7.31	N/A	7.41	N/A	7.61	N/A	pН
Total Kjeldahl Nitrogen	34.5	0.4	16.4	0.4	25.0	0.4	mg/L
Total Phosphorus (as P)	1.28	0.02	0.958	0.002	0.706	0,002	mg/L
Sample Description	Sewage Plant	Over Flow #1	Sewage Plant	Over Flow #2	Sewage Plant	Over Flow #3	
Sample Date	4/29/2020	3:00 PM	4/29/2020	11:00 PM	4/29/2020	7:00 AM	
Lab ID	1532	2775	1532776		1532777		
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	8.9	1	12.7	1	6.5	1	mg/L
Carbonaceous BOD	9.1	1	6.1	ĭ	13.4	1	mg/L
Sample Description	Sewage Plant	Over Flow #1	Sewage Plant	Over Flow #2	Sewage Plant	Over Flow #3	
Sample Date	4/29/2020	3:00 PM	4/29/2020	11:00 PM	4/29/2020	7:00 AM	
Lab ID	153:	2775	1532	2776	1532	777	
Solida	Result	MDL	Result	MDL	Result	MDL	Units
Suites	ricount	IIIDL	ricount	IIIDE	Hodan	WIDE	Office



Town of Cochrane - Wastewater Work Order Number: 398916

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 05/06/2020 16:38

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

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(i)fluoranthene.

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.



Client: Lynn Chapleau Work Order Number: 399004 Company: Town of Cochrane - Wastewater PO #: Address: 171 Fourth Ave, Box 490 Regulation: Informatio Cochrane, ON, P0L 1C0 Project #: **Bypass** Phone/Fax: (705) 272-5067 / (705) 272-2634 DWS #: Email: lynn.chapleau@cochraneontario.com Sampled By: Aaron Moi 5/1/2020 Date Order Received: Analysis Started: 5/1/2020 17 °C Arrival Temperature: Analysis Completed: 5/11/2020

WORK ORDER SUMMARY

Date of Issue: 05/11/2020 16:38

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

Sample Description	Lab ID	Matrix	Туре	Comments
Sewage Plant Over Flow #7	1532984	Wastewater	Grab	
Sewage Plant Over Flow #8	1532985	Wastewater	Grab	
Sewage Plant Over Flow #9	1532986	Wastewater	Grab	

METHODS AND INSTRUMENTATION

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

Method	Lab	Description
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD)
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.
TSS (A27)	Timmins	Determination of Total Suspended Solids in water by gravimetry



Town of Cochrane - Wastewater

This report has been approved by:

Date of Issue: 05/11/2020 16:38

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater

WORK ORDER RESULTS

Date of Issue: 05/11/2020 16:38

Sample Description	Sewage Plan	t Over Flow #7	Sewage Plant	Over Flow #8	Sewage Plant	Over Flow #9	
Sample Date	4/30/2020 3:00 PM		4/30/2020 11:00 PM		5/1/2020 7:00 AM		
Lab ID	153	2984	1533	1532985		2986	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
рН	7,61	N/A	7.72	N/A	7.86	N/A	рН
Total Kjeldahl Nitrogen	9.3	0.4	8,2	0.4	10.5	0.4	mg/L
Total Phosphorus (as P)	0.566 [0.568]	0.002	0,550	0.002	0.774	0.002	mg/L
Sample Description	Sewage Plant	t Over Flow #7	Sewage Plant Over Flow #8		Sewage Plant Over Flow #9		
Sample Date	4/30/2020 3:00 PM		4/30/2020 11:00 PM		5/1/2020 7:00 AM		
Lab ID	153	2984	1532985		1532986		
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	11.7	1	13.2	1	13.1	1	mg/L
Carbonaceous BOD	11.3	1	10.6	1	7.8	1	mg/L
Sample Description	Sewage Plant	Over Flow #7	Sewage Plant	Sewage Plant Over Flow #8		Over Flow #9	
Sample Date	4/30/2020	0 3:00 PM	4/30/2020	11:00 PM	5/1/2020 7:00 AM		
Lab ID	1533	2984	1532	2985	1532986		
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	64	2	80	2	23	2	mg/L



Town of Cochrane - Wastewater

Date of Issue: 05/11/2020 16:38

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recomm requirements of the method after the initial analysis.

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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOI Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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



Client:	Melissa Hoogenhoud	Work Order Number:	399088
Company:	Town of Cochrane - Wastewater	PO #:	
Address:	171 Fourth Ave, Box 490	Regulation:	Informatio
	Cochrane, ON, P0L 1C0	Project #:	Bypass
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Aaron Moi
Date Order Received:	5/4/2020	Analysis Started:	5/5/2020
Arrival Temperature:	14 °C	Analysis Completed:	5/11/2020

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
wage Plant Over Flow #10	1533245	Wastewater	Grab	
vage Plant Over Flow #11	1533246	Wastewater	Grab	
wage Plant Over Flow #12	1533247	Wastewater	Grab	
wage Plant Over Flow #13	1533248	Wastewater	Grab	
wage Plant Over Flow #14	1533249	Wastewater	Grab	
ewage Plant Over Flow #15	1533250	Wastewater	Grab	
wage Plant Over Flow #16	1533251	Wastewater	Grab	

METHODS AND INSTRUMENTATION

Date of Issue: 05/11/2020 16:38

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

Method	Lab	Description
BOD (A3)	Kirkland Lake	Determination of Biochemical Oxygen Demand (BOD)
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).
pH of Water (A2.0)	Timmins	Determination of Water pH by Ion Selective Electrode
TKN Water Dig. (A58)	Kirkland Lake	Determination of Total Kjeldahl Nitrogen in Waters with Block Digestion.
TP Water (A23.2)	Kirkland Lake	Determination of Total Phosphorus in Water.



Town of Cochrane - Wastewater

Method	Lab	Description
TCC (4.27)	Timomino	Determination (T. 140

TSS (A27)

Timmins

Determination of Total Suspended Solids in water by gravimetry

This report has been approved by:

Date of Issue: 05/11/2020 16:38

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater

WORK ORDER RESULTS

Sample Description	Sewage Plant	Over Flow #10	Sewage Plant	Over Flow #11	Sewage Plant	Over Flow #12	Sewage Plant	Over Flow#
Sample Date	5/1/2020	3:00 PM	5/1/2020	11:00 PM	5/2/2020	7:00 AM	5/2/2020	3:00 AM
Lab ID	1533	3245	153	3246	1533	3247	1533	3248
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL
рН	7.35	N/A	7.37	N/A	7.59	N/A	7.38	N/A
Total Kjeldahl Nitrogen	22.0	0.4	10.3 [10.3]	0.4	11.1	0.4	12.9	0.4
Total Phosphorus (as P)	0.842	0.002	0.453	0.002	0.558	0.002	0.827	0.002
Sample Description	Sewage Plant	Over Flow #14	Sewage Plant	Over Flow #15	Sewage Plant	Over Flow #16		
Sample Date	5/2/2020	10:00 PM	5/3/2020	6:00 AM	5/3/2020	2:00 PM		
Lab ID	1533	249	153	3250	1533	3251		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units	
pН	7,39	N/A	7.67	N/A	7.29	N/A	рН	
Total Kjeldahl Nitrogen	12.1	0.4	10.4	0.4	13.1	0.4	mg/L	
Total Phosphorus (as P)	0.763	0.002	0.435	0.002	0.862	0.002	mg/L	
Sample Description	Sewage Plant	Over Flow #10	Sewage Plant	Over Flow #11	Sewage Plant	Over Flow #12	Sewage Plant (Over Flow#
Sample Date	5/1/2020	3:00 PM	5/1/2020	11:00 PM	5/2/2020	7:00 AM	5/2/2020	3:00 AM
Lab ID	1533	245	153	3246	1533	247	1533	248
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL
BOD (5 day)	13.1 [12]	1	11.9	1	8	1	11.5	1
Carbonaceous BOD	11.1 [12.8]	1	8.2	4	3.3	į	11,3	1

Date of Issue: 05/11/2020 16:38



Town of Cochrane - Wastewater

Date of Issue: 05/11/2020 16:38

Sample Description	Sewage Plant	Over Flow #14	Sewage Plant	Over Flow #15	Sewage Plant	Over Flow #16		
Sample Date	5/2/2020	10:00 PM	5/3/2020	6:00 AM	5/3/2020	2:00 PM		
Lab ID	153:	3249	153	3250	153	3251		
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units	
BOD (5 day)	11,7	1	5.6	1	11.9	1	mg/L	
Carbonaceous BOD	3.2	1	2.6	1	11.7	1	mg/L	
Sample Description	Sewage Plant	Over Flow #10	Sewage Plant	Over Flow #11	Sewage Plant	Over Flow #12	Sewage Plant	Over Flow #
Sample Date	5/1/2020	3:00 PM	5/1/2020	11:00 PM	5/2/2020	7:00 AM	5/2/2020	3:00 AM
Lab ID	1533	3245	153	3246	1533	3247	1533	248
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL
Solids Total Suspended Solids	Result 87	MDL 2	Result 41	MDL 2	Result	MDL 2	Result	MDL 2
	87		41		52	1000		11111111
Total Suspended Solids	87 Sewage Plant	2	41 Sewage Plant	2	52 Sewage Plant	2		
Total Suspended Solids Sample Description	87 Sewage Plant 5/2/2020	2 Over Flow #14	41 Sewage Plant 5/3/2020	2 Over Flow #15	52 Sewage Plant	2 Over Flow #16 2:00 PM		
Total Suspended Solids Sample Description Sample Date	87 Sewage Plant 5/2/2020	2 Over Flow #14 10:00 PM	41 Sewage Plant 5/3/2020	2 Over Flow #15 6:00 AM	52 Sewage Plant 5/3/2020	2 Over Flow #16 2:00 PM		11111111



Town of Cochrane - Wastewater

Date of Issue: 05/11/2020 16:38

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recomm requirements of the method after the initial analysis.

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.

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOI Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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

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: MAY 25/20	Time of Call: 1208 (a.m.)p.m.
SAC Reference #: 904411	Person Who Called: Down Cichards
Called SAC at: 1208 Am Reported	ed By: Rob McNcbb
Called MOH at: 1216 Am Reporte	ed By" Rob MENCHS
Bypass: Spill: Leak:	Overflow:
Location of Incident: Cochae	STP
Time of Incident: //zoa.m./p.m. Receiver:_	Cilabelle Creek
Details of Incident: Havy Rain	
<u> </u>	
Downstream Users:	
Possible Effects on Receiver, Environment or Down	stream Users: No
NOTE: Take 3 Raw Sewage Samples Per Incident & overflow: 1. 5-day BOD and CBOD, Suspended Solids, p. Addition Calls Town Hall: Phone No. 272- 4361 Fax No. 272-Details of Call:	H, TKN and Total phosphorus -6068 Time of Call:
Termination of Incident	
Date: 1/147 29/20 Time of Call: 1059 Pers	son Contacted: fruce Brown
Time of Termination: 0800 Approximate V	Volume: 124.8 Cu. Meters
Duration of Bypass: 8 has	
Current Status: Chlorinating? Yes: No:	Explain:
Further Action Required:	
Reported By: AARON MONISON (163 CALLED M. O.H.	SFORM.014.Bypa.2013 SANDA LAPATNE



Client: Melissa Hoogenhoud Work Order Number: 401496 Company: Town of Cochrane - Wastewater PO#: 120000355 171 Fourth Ave, Box 490 Address: 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: Aaron Morrison 5/29/2020 Analysis Started: Date Order Received: 5/29/2020 17 °C Arrival Temperature: Analysis Completed: 6/8/2020

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	1541450	Wastewater	Grab		5/29/2020	12:00 AM
Sewage Plant Overflow	1541451	Wastewater	Grab		5/29/2020	MA 00:8

METHODS AND INSTRUMENTATION

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

Method Leb		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)	Modified from SM-5210 B		
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD),	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: 401496

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 401496

WORK ORDER RESULTS

Date of Issue: 06/08/2020 16:29

Sample Description	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow		
Sample Date	5/29/2020	12:00 AM	5/29/2020	5/29/2020 8:00 AM		
Lab ID	1541	450	1541	1541451		
Anions	Result	Result MDL		MDL	Units	
Nitrate (as N)	<0.05	0.05	2.11	0,05	mg/L	
Nitrite (as N)	<0.05	0.05	<0.05	0.05	mg/L	
Sample Description	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow		
Sample Date	5/29/2020	12:00 AM	5/29/2020			
Leb ID	1541	1541450		1541451		
General Chemistry	Result	MDL	Result	MDL	Units	
Ammonia (as N)	4.34	0.01	8.55	0,02	mg/L	
pH	7.09	N/A	7.57	N/A	рН	
Total Kjeldahl Nitrogen	7.8	0.4	9.6	0.4	mg/L	
Total Phosphorus (as P)	0.585	0.002	0,645 0.002		mg/L	
Sample Description	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow		
Sample Date	5/29/2020	12:00 AM	5/29/2020	MA 00:8		
Leb ID	1541	1541450		1541451		
Control (Control (Con						
Microbiology	Result	MDL	Result	MDL	Units	



Town of Cochrane - Wastewater Work Order Number: 401496

Sample Description	Sewage Pla	ant Overflow	Sewage Pla		
Sample Date	5/29/2020	12:00 AM	5/29/2020	8:00 AM	
Lab ID	154	1450	1541	451	
Oxygen Demand	Result	MDL	Result	Units	
BOD (5 day)	13.9	1	6.4	0.5	mg/L
Carbonaceous BOD	14	1	13,6	1	mg/L
Sample Description	Sewage Pk	ant Overflow	Sewage Pla		
Sample Date	5/29/2020	12:00 AM	5/29/2020		
Leb ID	154	1450	1541	451	
Solids	Result MDL		Result	MDL	Units
Total Suspended Solids	320	20	35.5	mg/L	

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number, Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

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

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT, CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.

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: JUNE 23/20 Time of Call: //55 (a.m./p.m.
SAC Reference #: 904466 Person Who Called: MIKE NELSON
Called SAC at: /200 Reported By:
Called MOH at: Reported By"
Bypass: Spill: Leak: Overflow:
Location of Incident: 5 TP
Time of Incident: 1/45 a.m./p.m. Receiver: 114BETCLE CREEK
Details of Incident: NERFLOW DUE P HONLY RAIN
Downstream Users: Note:
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 M.D.J.
Date: June 26/20 Time of Call: 1/40 Person Contacted: SATIMA WESSAGE WYONNA
Time of Termination: 0945 Approximate Volume: 5088.3 Cu. Meters
Duration of Bypass: 2 DAYS 22 M/S (70 HRS)
Current Status: Chlorinating? Yes: No: Explain:
Further Action Required:
Reported By: Aron Marigor SForm.014.Bypa.2013



Client: Company:	Melissa Hoogenhoud Town of Cochrane - Wastewater	Work Order Number: PO #:	403974
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
Phone/Fax:	Cochrane, ON, P0L 1C0 (705) 272-4232 / (705) 272-2634	Project #: DWS #:	Overflow
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Rob McNabb
Date Order Received: Arrival Temperature:	6/24/2020 17 °C	Analysis Started: Analysis Completed:	6/25/2020 7/2/2020

WORK ORDER SUMMARY

Date of Issue: 07/03/2020 15:30

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	1550178	Wastewater	Grab		6/23/2020	11:50 AM
Sewage Plant Overflow	1550179	Wastewater	Grab		6/23/2020	3:00 PM
Sewage Plant Overflow	1550180	Wastewater	Grab		6/23/2020	11:00 PM
Sewage Plant Overflow	_ 1550181	Wastewater	Grab		6/24/2020	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)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD)	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.



Town of Cochrane - Wastewater

Work Order Number: 403974

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

REPORT COMMENTS

Bacti Lot# N/A

This report has been approved by:

Date of Issue: 07/03/2020 15:30

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 403974

WORK ORDER RESULTS

Date of Issue: 07/03/2020 15:30

Sample Description	Sewage Pla	ant Overflow	Sewage Pla	ant Overflow	Sewage Pla	ant Overflow	Sewage Pla	ant Overflow	
Sample Date	6/23/2020	6/23/2020 11:50 AM		6/23/2020 3:00 PM 6/23/2020 11:00 PM		11:00 PM	6/24/2020 7:00 AM		
Lab ID	1550	0178	155	0179	1550	0180	155	0181	
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.05	0,05	<0.05	0.05	<0.05	0.05	2.87	0.05	mg/L
Nitrite (as N)	<0.05	0.05	<0.05	0.05	< 0.05	0.05	0,14	0.05	mg/L
Sample Description	Sewage Pla	ant Overflow	Sewage Pk	nt Overflow	Sewage Pla	ant Overflow	Sewage Pla	ant Overflow	
Sample Date	6/23/2020	11:50 AM	6/23/2020	3:00 PM	6/23/2020	11:00 PM	6/24/2020 7:00 AM		
Lab ID	1550	0178	1550	1550179 1550180		0180	1550181		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	4.38	0.01	3,42	0.01	3.73	0,01	0.50	0.01	mg/L
рН	6.88	N/A	7.1	N/A	7.15	N/A	7.53	N/A	ρН
Total Kjeldahl Nitrogen	25.6	0.4	14.1	0.4	13.1	0.4	4.2	0.4	mg/L
Total Phosphorus (as P)	3,87	0.02	1,500	0.006	1.290	0.006	0.361	0,002	mg/L
Sample Description	Sewage Pla	ant Overflow	Sewage Pla	Sewage Plant Overflow		Sewage Plant Overflow		Sewage Plant Overflow	
Sample Date	6/23/2020	11:50 AM	6/23/2020	3:00 PM	6/23/2020	11:00 PM	6/24/2020	7:00 AM	
Lab ID	1550178		1550)179	1550	1550180		1550181	
Microbiology	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
									-



Town of Cochrane - Wastewater Work Order Number: 403974

Sample Description	Sewage Pla	ant Overflow	Sewage Pk	int Overflow	Sewage Pla	nt Overflow	Sewage Pla	ant Overflow	
Sample Date	6/23/2020	11:50 AM	6/23/2020	3:00 PM	6/23/2020	11:00 PM	6/24/2020	7:00 AM	
Lab ID	155	0178	1550	0179	1550	180	1550	0181	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	8.5	1	10.2	1	11,2	1	8.4	1	mg/L
Carbonaceous BOD	9.3	1	11	1	10,9	1	4.9	1	mg/L
Sample Description	Sewage Plant Overflow		Sewage Plant Overflow		Sewage Plant Overflow		Sewage Plant Overflow		
Sample Date	6/23/2020	11:50 AM	6/23/2020	3:00 PM	6/23/2020	11:00 PM	6/24/2020	7:00 AM	
Lab ID	1550	0178	1550	0179	1550	180	155	0181	
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	450.0	6.7	153.0	6.7	116	4	278	2	mg/L

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

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

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES. Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(f)fluoranthene.

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.



Date Order Received Arrival Temperature:	6/25/2020 14 °C	Analysis Started: Analysis Completed:	6/26/2020 7/2/2020
Email:	Melissa.Hoogenhoud@cochraneontario.com	Sampled By:	Mike Nelson
Phone/Fax:	(705) 272-4232 / (705) 272-2634	DWS #:	
	Cochrane, ON, P0L 1C0	Project #:	Overflow
Address:	171 Fourth Ave, Box 490	Regulation:	Information not provided
Company:	Town of Cochrane - Wastewater	PO #:	
Client:	Melissa Hoogenhoud	Work Order Number:	404115

WORK ORDER SUMMARY

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

Sample Description	Lab ID	Metrix	Туре	Comments	Date Collected	Time Collected
Sewage Plant Overflow	1550654	Wastewater	Grab		6/24/2020	3:00 PM
Sewage Plant Overflow	1550655	Wastewater	Grab		6/24/2020	11:00 PM
Sewage Plant Overflow	1550656	Wastewater	Grab		6/25/2020	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)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	Modified from SM-5210-B
E _s 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 (S2)	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: 404115

This report has been approved by:

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 404115

WORK ORDER RESULTS

Date of Issue: 07/03/2020 15:39

Sample Description	Sewage Pla	int Overflow	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow	
Sample Date	6/24/2020 3:00 PM		6/24/2020	6/24/2020 11:00 PM		6/25/2020 7:00 AM	
Lab ID	1550654		1550	1550655		656	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	1.41	0.05	2.33	0.05	3,10	0.05	mg/L
Nitrite (as N)	1.40	0.05	0.27	0.05	0.09	0.05	mg/L
Sample Description	Sewage Pla	ınt Overflow	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow	
Sample Date	6/24/2020	3:00 PM	6/24/2020	6/24/2020 11:00 PM		6/25/2020 7:00 AM	
Leb ID	1550	0654	1550	1550655		1550656	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	3,42	0.01	2,47	0,01	2.46	0.01	mg/L
рH	7.56	N/A	7.77	N/A	8.03	N/A	pН
	[7.58]		****	14//4	0.03	14/7	рΠ
Total Kjeldahl Nitrogen	[7.58] 8.6	0,4	5.8	0.4	9.7	0.4	mg/L
Total Kjeldahl Nitrogen Total Phosphorus (as P)							·
	8.6	0,4 0.002	5.8	0.4	9.7	0.4 0.002	mg/L
Total Phosphorus (as P)	8,6 0.681	0.4 0.002 int Overflow	5.8 0.512	0,4 0,002 nt Overflow	9.7 0.551	0.4 0.002 nt Overflow	mg/L
Total Phosphorus (as P) Semple Description	8.6 0.681 Sewage Pla	0,4 0,002 ant Overflow 0 3:00 PM	5.8 0.512 Sewage Pta	0.4 0.002 nt Overflow 11:00 PM	9.7 0.551 Sewage Pla	0.4 0.002 nt Overflow 7:00 AM	mg/L
Total Phosphorus (as P) Sample Description Sample Date	8,6 0.681 Sewage Pla 6/24/2020	0,4 0,002 ant Overflow 0 3:00 PM	5.8 0.512 Sewage Pla 6/24/2020	0.4 0.002 nt Overflow 11:00 PM	9.7 0.551 Sewage Pla 6/25/2020	0.4 0.002 nt Overflow 7:00 AM	mg/L



Town of Cochrane - Wastewater Work Order Number: 404115

Sample Description	Sewage Plant Overflow		Sewage Pla	Sewage Plant Overflow		Sewage Plant Overflow	
Sample Date	6/24/2020 3:00 PM		6/24/2020	6/24/2020 11:00 PM		6/25/2020 7:00 AM	
Lab ID	1550	0654	1550	1550655		1550656	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	11.7	1	12,8	1	9.7	1	mg/L
Carbonaceous BOD	12.5	1	11	1	5,3	1	mg/L
Sample Description	Sewage Pla	int Overflow	Sewage Plant Overflow		Sewage Plant Overflow		
Sample Date	6/24/2020	3:00 PM	6/24/2020	6/24/2020 11:00 PM		6/25/2020 7:00 AM	
Lab ID	1550	0654	1550	0655	1550656		
Solids	Result	MDL	Result	MDL	Result	MDL	Units
Total Suspended Solids	79	2	45	2	116	2	mg/L

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 07/03/2020 15:39

[]: 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 requesti

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT. CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES.

Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(i)fluoranthene.

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.



Client:	Melissa Hoogenhoud	Work Order Number:	404202
Company: Address:	Town of Cochrane - Wastewater 171 Fourth Ave, Box 490	PO #: 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:	Rob McNabb
Date Order Received:	6/26/2020	Analysis Started:	6/26/2020
Arrival Temperature:	22 °C	Analysis Completed:	7/6/2020

WORK ORDER SUMMARY

Date of Issue: 07/06/2020 16:21

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	1550921	Wastewater	Grab		6/25/2020	3:00 PM
Sewage Plant Overflow	1550922	Wastewater	Grab		6/25/2020	11:00 PM
Sewage Plant Overflow	1550923	Wastewater	Grab		6/26/2020	6:55 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)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	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: 404202

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater Work Order Number: 404202

WORK ORDER RESULTS

Sample Description	Sewage Pk	ant Overflow	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow	
Sample Date	6/25/202	6/25/2020 3:00 PM		6/25/2020 11:00 PM		6/26/2020 6:55 AM	
Lab ID	155	0921	1550	922	1550	923	
Anions	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	1,35	0,05	<0.05	0.05	2.63	0.05	mg/L
Nitrite (as N)	0.77	0.05	1.01	0.05	<0.05	0.05	mg/L
Sample Description	Sewage Pk	ant Overflow	Sewage Pla	nt Overflow	Sewage Pla	nt Overflow	
Sample Date	6/25/202	0 3:00 PM	6/25/2020	11:00 PM	6/26/2020	6:55 AM	
Leb ID	155	0921	1550	1550922		1550923	
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	2,49	0.01	3,73	0.01	2,34	0,01	mg/L
nLl							
pH	7.43	N/A	7.37	N/A	7.63	N/A	pН
pn Total Kjeldahl Nitrogen	7.43 8.6	N/A 0.4	7.37 1.5	N/A 0.4	7.63 38.1	N/A 0.4	pH mg/L
							•
Total Kjeldahl Nitrogen	8,6 0,606	0.4	1.5	0.4 0.002	38.1	0.4	mg/L
Total Kjeldahl Nitrogen Total Phosphorus (as P)	8,6 0,606 Sewage Pk	0.4 0.002	1.5 0.707	0.4 0,002 nt Overflow	38.1 0.658	0.4 0.002 nt Overflow	mg/L
Total Kjeldahl Nitrogen Total Phosphorus (as P) Semple Description	8,6 0,606 Sewage Pk 6/25/2020	0,4 0,002 ant Overflow	1.5 0.707 Sewage Pla	0.4 0.002 nt Overflow 11:00 PM	38.1 0,658 Sewage Pla	0.4 0.002 nt Overflow 6:55 AM	mg/L
Total Kjeldahl Nitrogen Total Phosphorus (as P) Sample Description Sample Date	8,6 0,606 Sewage Pk 6/25/2020	0,4 0,002 ant Overflow 0 3:00 PM	1.5 0.707 Sewage Pla 6/25/2020	0.4 0.002 nt Overflow 11:00 PM	38.1 0,658 Sewage Pla 6/26/2020	0.4 0.002 nt Overflow 6:55 AM	mg/L



Town of Cochrane - Wastewater Work Order Number: 404202

Sample Description	Sewage Pla	ant Overflow	Sewage Pla	int Overflow	Sewage Pla	ant Overflow	
Sample Date	6/25/2020 3:00 PM		6/25/2020	6/25/2020 11:00 PM		0 6:55 AM	
Lab ID	1550	0921	1550	0922	1550	0923	
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	11,3	1	10.2	1	11.9	1	mg/L
Carbonaceous BOD	12.8	1	12.2	1	11,1	1	mg/L
Sample Description	Sewage Pla	ant Overflow	Sewage Plant Overflow		Sewage Plant Overflow		
Sample Date	6/25/2020	3:00 PM	6/25/2020	6/25/2020 11:00 PM		6/26/2020 6:55 AM	
Lab ID	1550	0921	1550922		1550923		
Solids	Result	MDL	Result	MDL	Result	MDL.	Units
Total Suspended Solids	47 [39]	2	64	2	25	1	rng/L

LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number, Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

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,

Exceedences: HIGHLIGHTED CELLS INDICATE THAT THE RESULT EXCEEDS A REGULATORY LIMIT, CALCULATED UNCERTAINTY ESTIMATIONS ARE NOT APPLIED FOR DETERMINING SAMPLE EXCEEDANCES, Benzo(b)fluoranthene: Results for benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene.

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.

Page 4 of 4

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

	ne of Call: <u>0/05</u> a.m./p.m.
SAC Reference #: 904 786 Per	son Who Called: AMON MOREISON
Called SAC at: 0/65 Reported B	Y: NETL HAMILTON
Called MOH at: O//O MonAll Reported B	y"_TAWA
Bypass: Spill: Leak:	
Location of Incident: COCHEANS 5	
Time of Incident: 0045 a.m./p.m. Receiver:	LILABELLE CKER
Details of Incident:)
Downstream Users:	
NOTE: Take 3 Raw Sewage Samples Per Incident & Have overflow: 1. 5-day BOD and CBOD, Suspended Solids, pH, Take Addition Calls Town Hall: Phone No. 272- 4361 Fax No. 272-606 Details of Call:	ΓKN and Total phosphorus
Termination of Incident	
Date: SEPT 29/2 Time of Call: DB/G Person	Contacted: AL/M
Time of Termination: <u>5335</u> Approximate Volu	me: 123.6 Cu. Meters
Duration of Bypass: 3 hrs 45 min	ر
Current Status: Chlorinating? Yes: No: Ex	xplain:
Further Action Required:	
Reported By: AARON MORROWN M. OH 1020 - LEFT M	



Client: Melissa Hoogenhoud Work Order Number: 412537 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: Aaron Morrison 9/29/2020 Date Order Received: Analysis Started: 9/29/2020 18 °C Arrival Temperature: Analysis Completed: 10/5/2020

WORK ORDER SUMMARY

Date of Issue: 10/05/2020 16:44

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	1580479	Wastewater	Grab		9/29/2020	12:55 AM
Sewage Plant Overflow	1580480	Wastewater	Grab		9/29/2020	8:30 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)	Modified from SM-5210 B
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	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: 412537

REPORT COMMENTS

Bacti lot # N/A

This report has been approved by:

Date of Issue: 10/05/2020 16:44

Adam Tam, M.Sc.

Laboratory Director



Town of Cochrane - Wastewater

Work Order Number: 412537

WORK ORDER RESULTS

Date of Issue: 10/05/2020 16:44

Sample Description	Sewage Pla	ant Overflow	Sewage Pla	nt Overflow	
Sample Date	9/29/2020	12:55 AM	9/29/2020	8:30 AM	
Leb ID	158	0479	1580)480	
Anions	Result	MDL	Result	MDL	Units
Nitrate (as N)	0.28	0.05	0.71	0.05	mg/L
Nitrite (as N)	0.13	0.05	0.13	0.05	mg/L
Sample Description	Sewage Pk	ant Overflow	Sewage Pla	nt Overflow	
Sample Date	9/29/2020	12:55 AM	9/29/2020	08:30 AM	
Lab ID	158	0479	1580)480	
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	2.84	0.01	8.40	0.02	mg/L
рН	7.24	N/A	7.45	N/A	pН
Total Kjeldahl Nitrogen	15.3 [15.3]	0.4	16.5	0.4	mg/L
Total Phosphorus (as P)	1.43	0.02	1.67	0.02	mg/L
Sample Description	Sewage Pk	ant Overflow	Sewage Pla	nt Overflow	
Sample Date	9/29/2020	12:55 AM	9/29/2020	08:30 AM	
Lab ID	158	0479	1580)480	
Microbiology	Result	MDL	Result	MDL	Units
			The same of		



Town of Cochrane - Wastewater Work Order Number: 412537



LEGEND

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

[rr]: After a parameter name indicates a re-run of that parameter, If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 10/05/2020 16:44

[]: 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.

205 272 5067

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: NOV 10/20	Time of Call: OVO a.	m./p.m
Reference #: 904831		
Office Called: SAC & 802 Pm Report Bypass: Spill: Leak	ted By: Chris MM ++ o	N
Location of Incident: STP Cachrae		
Time of Incident: 0 800 a.m./p.m Receiver:	Likabelle errek	
Details of Incident: Heavy Rair	15	
Possible Effects on Receiver, Environment or Downstream Users: NOTE: Take 2 Raw Sewage Samples Per Incident the overflow:	nstream Users:	
 5-day BOD and CBOD, Suspended Solids, Addition Calls 	pH, TKN and Total phosphorus	
Town Hall: Phone No. 272-4361 Fax No. 272	2-6068 Time of Call:	
Details of Call:		
Termination of Incident		
Date: <u>MSV 11/70</u> Time of Call:Pe	rson Contacted:	
Date: <u>Mov 11/20</u> Time of Call: Pe Time of Termination: /5//0 Approximate		
Current Status: Chlorinating? Yes: No;	_ Explain:	
Further Action Required:		
Reported By:	SForm.014.Bypa.2013	



Client:	Melissa Hoogenhoud	Work Order Number:	416986
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:	Rob McNabb
Date Order Received:	11/12/2020	Analysis Started:	11/13/2020
Arrival Temperature:	15 °C	Analysis Completed:	11/18/2020

WORK ORDER SUMMARY

Date of Issue: 11/18/2020 16:58

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

Sample Description	Lab ID	Matrix	Туре	Commente	Date Collected	Time Collected
Sewage Plant Overflow	1598276	Wastewater	Grab		11/10/2020	8:00 PM
Sewage Plant Overflow	1598277	Wastewater	Grab		11/11/2020	4:00 AM
Sewage Plant Overflow	1598278	Wastewater	Grab		11/11/2020	10:00 AM
Sewage Plant Overflow	1598279	Wastewater	Grab		11/11/2020	5:00 PM

METHODS AND INSTRUMENTATION

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

Method	Leb	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)	Modified from SM-5210 B			
CBOD (A3)	Kirkland Lake	Determination of Carbonaceous Biochemical Oxygen Demand (CBOD).	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			
TIKN 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 310,0			



Town of Cochrane - Wastewater

Work Order Number: 416986

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

This report has been approved by:

Adam Tam, M.Sc. Laboratory Director



Town of Cochrane - Wastewater

Work Order Number: 416986

WORK ORDER RESULTS

Date of Issue: 11/18/2020 16:58

Sample Description	Sewage Pla	Sawage Plant Overflow		ent Overflow	Sewage Pla	nt Overflow	Sewage Pla	Sewage Plant Overflow				
Sample Date	11/10/202	0 8:00 PM	11/11/202	20 4:00 AM	11/11/2020	10:00 AM	11/11/202	20 5:00 PM				
Leb ID	159	8276	159	8277	1598	8278	159	1598279				
Anions	Result	MOL	Result	MDL	Result	MDL	Result	MDL	Units			
Nitrate (as N)	< 0.05	0.05	2 47	0.05	2 70	0.05	1.40	0.05	mg/L			
Nitrite (as N)	< 0.05	0.05	< 0.05	0.05	0.26	0.05	0,58	0.05	mg/L			
Sample Description	Sewage Pla	Sewage Plant Overflow		ant Overflow	Sewage Pla	nt Overflow	Sawage Pli					
Sample Date	11/10/203	0 8:00 PM	11/11/202	0 4:00 AM	11/11/2020	10:00 AM	11/11/202					
Lab ID	159	3276	159	1598277		3278	159					
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MOL	Units			
Ammonia (as N)	3.74	0.01	0.71	0.01	4 55	0,01	3,75	0.01	mg/L			
pН	7 12	N/A	7.67	N/A	7.58	N/A	7.54	N/A	рН			
Total Kjeldahl Nitrogen	19.2	0.4	5.0 [5.0]	0.4	8.2	0.4	21,3	0.4	mg/L			
Total Phosphorus (as P)	2 12	0.02	0.246	0.002	0 880	0.002	0.847	0 002	mg/L			
Sample Description	Sewage Piz	nt Overflow	Sewage Pla	ant Overflow	Sewage Pla	nt Overflow	Sewage Pie					
Sample Date	11/10/202	0 8:00 PM	11/11/202	0 4:00 AM	11/11/2020	10:00 AM	11/11/202	0 5:00 PM				
Leb ID	1598	3276	1598	1598277		3278	1598279					
Microbiology	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units			
Escherichia coli	1970000	10000	73000 [82000]	1000	1380000	10000	890000	10000	CFU/100m			



Town of Cochrane - Wastewater

Work Order Number: 416986

Sample Description	Sewage Pla	ant Overflow	Sawage Pl	ant Overflow	Sawage Pla	ant Overflow	Sewage Pi	ant Overflow	
Sample Date	11/10/202	11/10/2020 8:00 PM		20 4:00 AM	11/11/2020	0 10:00 AM	11/11/202		
LabiD	1598	8276	159	1598277		8278	159		
Oxygen Demand	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
BOD (5 day)	10,7	1	8.5	1	13.4	1	12.7	1	mg/L
Carbonaceous BOD	10,5	1	5.9	1	4 5	26	13,8	1	mg/L
Sample Description	Sewage Pla	int Overflow	Sawage Pla	Sawage Plant Overflow		ant Overflow	Sawaga Pio		
Sample Date	11/10/202	0 8:00 PM	11/11/202	20 4:00 AM	11/11/2020	0 10:00 AM	11/11/202	20 5:00 PM	
Leb ID	1598	3276	159	1598277		8278	159		
Solids	Result	MDL	Renult	MDL	Result	MDL	Flesult	MDL	Units
Total Suspended Solids	320	4	60.5	60.5		0 67	67	mg/L	

LEGEND

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

[rf]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 11/18/2020 16:58

[]: 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

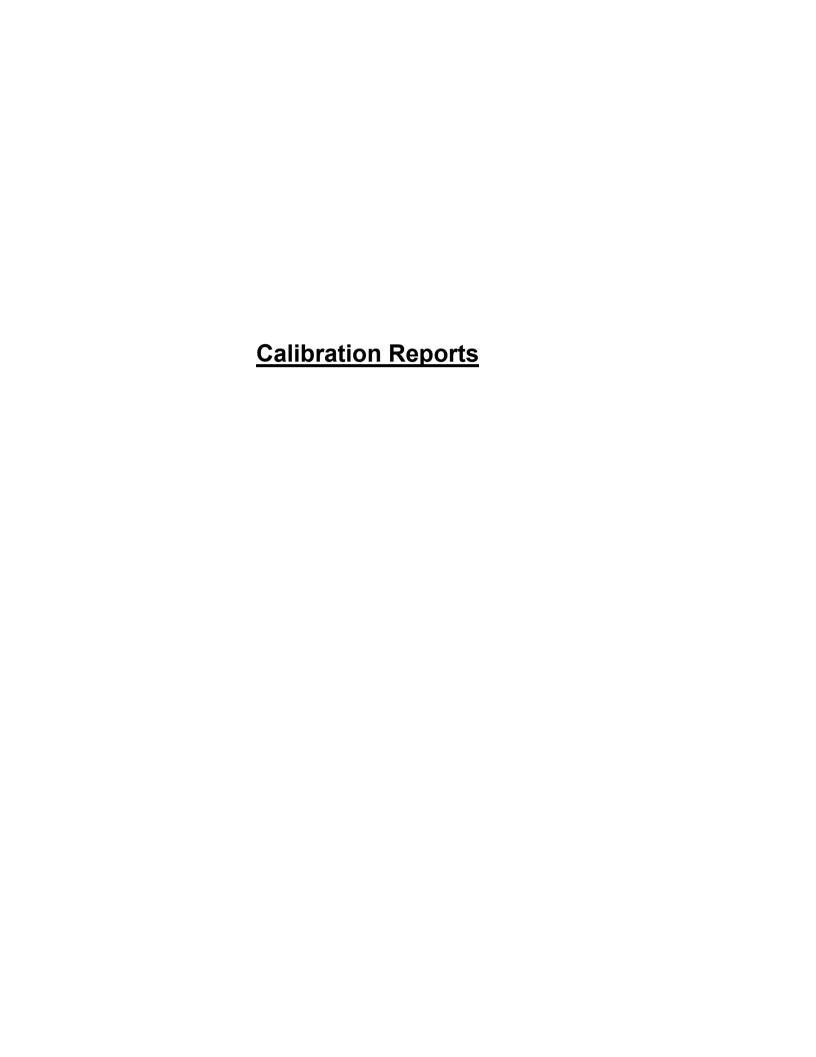


GENERAL CHAIN OF CUSTODY FORM

Page	1	of	1	

	Please use our Drinking Water Chain of Custody Form for regulated drinking water samples												
REPORT	TO:	INVOICE TO: (if different from Report)	PROJECT INFORMATION:										
Client:	Town of Cochrane - Wastewater	Client:	TM Quote #:										
Address:	171 4th Ave, Box 490	Address;	Client P.O. #										
	Cochrane, ON POL 1CO		Client Project # Overflow										
Contact:	Melissa Hoogenhoud	Contact:											
Email:	melissa.hoogenhoud@cochraneontario.com	Email:	=======================================										

Address:	171 4th Ave, Box 490				Address:											Client P.O. #								
-	Cochrar	ne, ON PC	L 1C0																	Clie	nt Project :	# Overfic	w	
Contact:	Melissa	Hoogenho	ud		Con	ntact:														1				
Email:	melissa.	.hoogenho	ud@cochraneon	tario.com	Ema	ail:														1				
Phone:	705-272	2-5067	Fax: 705-	272-2583	Pho	Phone: Fax:										1								
REPORTI	NG/INVOICI	NG FORMAT	TURN A	ROUND TIME (TAT)*		Т			ANALYSIS REQUESTED											LABORATORY USE ONLY				LY
□Fax	☑Email	□Mail	□1 Business Da	ay □2 Business Days	l &		Π											<u>@</u>	<u>]</u>	0	Wo	ORK ORDER	NUMBE	ER:
QC □Yes			ays ☑Standard	CONTAINERS	"					Nitrogen						(If applicable)	(if applicable)	FILTERED?	RECEIVED					
	MPLE DISPO		SPECIFIC DATE:			CBOD5					it						ilde	de	<u> </u>	REC				
		Return		gements must be made for	<mark>-</mark> 片												<u>=</u>		FIELD !	CONTAINERS				
	SAMPLIN		TUSD/WE	E DESCRIPTION	NUMBER	BOD5.	[Amonia	lgt	Nitrite	: <u>:</u>			FIELD PH	=	METALS	I A				
DATE (mm-dd-vv)	TIME	MATRIX**	(This Will	Appear On The Report)	Į≥	8	TSS	1	핆	Į. K.	Am	Nitrat	불	UII OII			FIE	FIELD .	METAL	S	TEMP	Btl. Type	La	b ID
Nov 10/20		WW	Sewage Plant C	Overlfow	3	X	Х	Х	Х	Х	X	Х	Х	Х									R I	
NOV /1/20			1) 1/		3	X	X	X	X	X	X	Χ.	X	X		_			_				188	
NOV 11/20			Y W		13	X	X	X	Х	X	Х	X	Х	X	_		_					4.4		
NOULING	BODAN	Liu	\(\)	<i>+</i>	3	X	¥	×	Х	X	X	X	Х	X	\dashv	+	+-	+	-				-	
<u> </u>					+-	╁	╁	┢		Н	-	\dashv	\dashv	\dashv	\dashv	+	+-	+	-	300				
					+	+	\vdash	\vdash	H	Н	-	\vdash	\dashv	\dashv	\dashv	+	+	+-	1					
						\top				H		\Box		\exists	\exists	\top								
															\Box						العجوا			
										Ш			\Box	4	_	\perp		_				I ESTRAN		
					+	-				Н	-	\dashv	\dashv	+	\dashv	+	-	+	-					
						\vdash						\dashv	\dashv	\dashv	\dashv	+	+	\vdash				1000		
SW=Surfa	ace Water		, WW=Wastewat	. P=Paint, S=Soil, SL=Slu er, SD=Sediment	idge,			REGULATION				Ind	ustri arse	al / C Soil	Comr	nercia Fine	al Soil		Surface	ntial e	P□) /Parkland □Subsu MER □O	rface	Agricult	ural
COMMEN	TS/FIELD I	NOTES:						REG	Sev	werl	Jse	: 🗆 :	Sani	tary		torm	Mu	nicipa	ality:	_				
								Rel		Othe uishe		те:	stm	ark	Ву (Signa	ture)				Date		Time	
Sampled	ampled By Date			Tim	ie.		Shi	ppe	d By		345		1117		5502	15,85	1027	K 1		Shipping	Referen	Ce.		
Kah Mc	Noble	Red may	الله.	NOV 11/20	3.	000)m				-00		C.	Alto.	lig:					-	-10-1115			
Received	eceived By Date			Tim	Time 'Received at Testmark By									Date		Time								





ocation:		Cochrane WWTP						
ORG #		Work Order #:						
nstrument:		Ро	rtable Di	issolved Oxygen I	Meter			
OCWA ID:_			s	erial #:	16090000)3927		
tart Day/Tin	ne: 16 / 03 / 20			End Day/Tim	e: 16 / 03 / 20	@ 12:45 24hour clock	•	
of Workers:		24hour clock			DD/MM/YY Durs:1/4			
Type of Wo ✓ Scheduled N		Correc		ork Order	_			
_	Transmitter				ity	✓ Other: DO	_	
Calibration: See R Input/Standard			calibr As Foun		I A	As Left		
mp an Dialitica a		Actual Value				% Accura	icy	
Material Us	ed•	% Accura	acy Calci	ulation => ABS ([(Actual Value/Stand	dard) -1] x 100%)		
Quantity	Part #				Description			
1			6r	nm of Distilled w	ater as per calibra	ation instructions		
122								
Comments:					••••••			
	(1/4") of water in stabilize. Begin o		30 sec	conds. Insert p	robe in beaker	above water. A	llow	
Instrument Pa	assed Calibratio	on.						
In good work	ing order.							
Name:	Blake Dic	kinson		Signature:				



Location:			Cochi	rane WWTP		
ORG#			Work	Order #:		
nstrument:			Spectro	ohotometer DR28	00	
OCWA ID:_			_ s	erial #:	1230881	
Start Day/Tir f of Workers	@ 12 : 15 24hour clock	@ 12:15 End Day/Tim		e: 16 / 03 / 20 DD/MM/YY Durs: 1/4	@ 12:30 . 24hour clock	
Type of Wo ✓ Scheduled N	ork Order:	Correc	tive W o	ork Order	Other:	
Instrument Recorder	Type:	□рН □	Chlori	ne 🔲 Turbid	ity 🔲 Flow 🔽	Other: Spectrophotometer
Calibration		verse page for				
Input/Standard		As Foun				Left
		Actual Value		% Accuracy	Actual Value	% Accuracy
See ba	See back of page					
Material Us	sed:	% Accura	ıcy Calcı	l ulation => ABS (/	 (Actual Value/Standar	·d) –1] x 100%)
Quantity	Part #				Description	
1	263530		Low Range DPD secondary standards			
1	27639-0	00		DR chec	k absorbency stanc	lards
Comments:						***********
Name	Blake Dic	kinson		Signature		

Calibration:

Input/Standard	As F	ound	As Left		
	Actual Value	% Accuracy	Actual Value	% Accuracy	
Wave Length 420 nm					
0.652 +/- 0.050	0.678	96.16%			
1.221 +/- 0.100	1.270	96.14%			
1.814 +/- 0.150	1.860	97.52%			
Wave Length 520 nm					
Trato Zongar ozo IIII					
0.658 +/- 0.050	0.671	98.06%		-	
1.221 +/- 0.100	1.256	97.21%			
1.812 +/- 0.150	1.843	98.31%			
Wave Length 560 nm					
0.000 - 1.0.000	0.070	00.500/			
0.668 +/- 0.050	0.678	98.52%			
1.240 +/- 0.100	1.268	97.79%			
1.838 +/- 0.150	1.866	98.49%			
Wave Length 610 nm					
wave Length 610 mm					
0.659 +/- 0.050	0.655	99.39%			
1.218 +/- 0.100	1.224	99.50%			
1.803 +/- 0.150	1.803	100%			
1.803 +7- 0.190	1.003	100%			
Program 80				-	
1 Togram 00					
0.21 mg/l +/- 0.09	0.20	95.23%		_	
0.86 mg/l +/- 0.10	0.86	100%			
1.55 mg/l +/- 0.14	1.56	99.35%			
1.00 mg/1 1/ 0.14	1.00	33.3070			
Program 85					
1 1051 a 00					
0.23 mg/l +/- 0.09	0.22	95.65%			
0.95 mg/l +/- 0.10	0.94	98.94%			
1.71 mg/l +/- 0.14	1.71	100%			
v inga v o.i i		10070			
			-	-	
				_	



ocation: _	cation: Cochrane WWTP								
			Work	Order #:					
	-			able SenSION P					
OCWA ID:			_	erial #:	615107				
tart Day/Time: 16 / 03 / 20 @ 12 : 0 DD/MM/YY 24hour clock of Workers: 1			_ E	End Day/Tim Total Man H	DD/MM/YY 1/4	@ 12:15 . 24hour clock			
	ork Order: Maintenance								
	nt Type: Transmitter See Re				ity	Other:			
Inpu	t/Standard		s Four		As	Left			
		Actual Value		% Accuracy	Actual Value	% Accuracy			
	pH 4.00	4.19		95.46%	4.02	99.50%			
	pH 7.00	7.11		98.45%	7.02	99.71%			
p	bH 10.00	10.10		99.00%	10.06	99.40%			
Material U	J sed: Part # 228344 228354	9	y Calc	ŀ	Description Hach pH 4 Buffer	rd) –1] x 100%)			
1	228364		Hach pH 7 Buffer Hach pH 10 Buffer						
Comments	S :								
Name:	Blake Dic	kinson		Signatura					



ocation:		Cochrane WWTP						
PRG #			Work	Order #:				
nstrument:		Ро	rtable Di	ssolved Oxygen	Meter			
CWA ID:			S	erial #:	160900	003927		
	t Day/Time: 11 / 06 / 20 @ 10 : DD/MM/YY 24hour clo Workers: 1			End Day/Tim Total Man Ho			11 : 00	
Type of Wor ✓ Scheduled M	rk Order: aintenance	Correc		ork Order				
	Transmitter			ne Turbid	ity	V Othe	er:DO	
Input/St	See Re		S Foun			A a I a£	L	
IIIput/Si	Input/Standard		Actual Value		Actual Value	As Left	% Accuracy	
Material Use	ed:	% Accura	acy Calcı	ulation => ABS(/	(Actual Value/Sta	ndard) – I	!] x 100%)	
Quantity	Part #	<u>E</u>			Description			
1			6r	nm of Distilled w	ater as per calib	oration in	structions	
Comments: .								
	1/4") of water in	a beaker for	30 sec	conds. Insert n	robe in beake	er abov	e water Allo	
for probe to st	abilize. Begin o	calibration.		orido: modre p	robo in boanc	Ji abov	o water. 7 mo	
Instrument Pa	ssed Calibratio	on.						
In good workir	ng order.							
Name:	Blake Dic	kinson		Signature:				



ocation: _	n: Cochrane WWTP								
			Work	Order #:					
	-								
CWA ID:			_ s	erial #:	615107				
of Worker Type of W		@ 11 : 45 24hour clock	@ 11:45 End Day/Tim 24hour clock Total Man H			@ 12:00 _ 24hour clock			
Instrumer	nt Type: Transmitter		Chlori		∐Other: ity ∏Flow ∏	Other:			
Inpu	t/Standard	A	s Four		As Left				
		Actual Value		% Accuracy	Actual Value	% Accuracy			
	pH 4.00	4.20		95.23%	4.02	99.50%			
	pH 7.00	7.32	7.32 10.25		7.02	99.71%			
	H 10.00		av Cala	97.56%	10.07	99.30%			
Material U	Jsed:	% Accura	cy Caic	ulation => ADS(/	(Actual Value/Standar	a) –1] x 100%)			
Quantity	Part	# [Description				
1	22834	49	Hach pH 4 Buffer						
1	22835	49	Hach pH 7 Buffer						
1	22836	49	Hach pH 10 Buffer						
Comments	S:			***********	**************				
Name:	Blake Did	ckinson		Signature:					



Location:	Cochrane WWTP							
ORG #			Work	Order #:				
	t:			CM Transmitter - V		All Control of Control of Control		
OCWA ID	•	W-10-11-	s	erial #:	120859005	177		
start Day/	Fime: 15 / 09 / 20	@ 11:15	E	End Day/Tim	e: 15 / 09 / 20 DD/MM/YY	@ 11:30 .		
of Worke	DD/MM/YY	24hour clock	7	Total Man H	DD/MM/YY Durs: 1/4	24hour clock		
Type of Work Order: Scheduled Maintenance Corrective Work Order Other:								
	ent Type: Transmitter on: See R				ity ☑Flow 🔲	Other:		
	ut/Standard		As Four		Δs	Left		
		Actual Value		% Accuracy				
	5.0cm		4.8cm		5.0cm	100%		
	- 17							
Material			acy Calc	 ulation => ABS (/	(Actual Value/Standar	rd) –1] x 100%)		
Quantity	Part	#			Description			
	State of the state							

Commen								
	l 1 point calibratio . Adjusted as need		eight o	f water at flum	ne compared to m	neasurement on		
Name:	Blake Di	ckinson		Signature:	19			



Location:	Cochrane WWTP							
ORG #		***	Work	Order #:				
nstrument:		HACH	ОСМ Т	ansmitter - Influer	nt Bypass			
OCWA ID:			S	erial#:	PBD/LO2803	361		
Start Day/Tim				End Day/Tim	e: 15 / 09 / 20 DD/MM/YY	@ 11:30 .		
of Workers:			1	Total Man H	ours:1/4	2 modi didek		
Type of Wor		_						
Scheduled M	aintenance	Corrective Work Order Other:_						
Instrument 7 Recorder [Calibration:					ity ☑Flow	Other:		
Input/St			As Foun		As	Left		
		Actual Value		% Accuracy	Actual Value	% Accuracy		
Material Use	d·	% Accura	acy Calci	ulation => ABS([(Actual Value/Standard	d) -1] x 100%)		
Quantity	Part #	!			Description			
					S			
					- A Prince			
<u> </u>	-							
Comments:					*****	*******		
Performed 1 p	oint calibration	i. Placed med	ium un	der transduce	r to check zero. V	erified reading		
on now transii	iiller.							
	12							
Name:	Blake Dic	kinson		Signature	15			



Location:	n: Cochrane WWTP								
ORG #Work Order #:									
nstrument:		HACH (OCM Tr	ansmitter - Efflue	nt Bypass				
OCWA ID:			_ s	erial #:	120859005	5176			
Start Day/Tim	ne: 15 / 09 / 20	@ 11:00 24hour clock	F	End Day/Tim	e: 15 / 09 / 20	@ 11:15 .			
of Workers:		24hour clock	1	Total Man H	DD/MM/YY Durs: 1/4	24hour clock			
Type of Wor ✓ Scheduled M		Correct	ive W	ork Order	Other:_				
Instrument Recorder Calibration:	Transmitter	pH [ne Turbid	ity	Other:			
Input/Standard			s Four		As Left				
		Actual Value		% Accuracy	Actual Value	% Accuracy			
0.0	0cm	0.00cm		100%	11				
				A POCCO					
Material Use	ed:	% Accura	cy Calci	ulation => ABS(/	(Actual Value/Standa	ırd) –1] x 100%)			
Quantity	Part #	!			Description				
				-					
			-						
				,		51PXI-111 - 15101			
Comments:						**************			
	ooint calibratior oflow was pres					measurement on			
					13-6				
Name:	Blake Dic	kinson		Signature					



Location:		Cochrane WWTP							
ORG #	**************************************								
nstrument:		HACH OCM Transmitter - East							
OCWA ID:_				erial #:	PBD/E4170	039			
tart Day/Ti	ne: 19 / 09 / 19	@ 12:30	<u> </u>	end Day/Tim	e: 19 / 09 / 19	@ 12:45 24hour clock			
	: 1	24nour clock		Total Man Ho		24hour clock			
Type of Wo		Correc	ctive W	ork Order	Other:_				
Instrument Recorder Calibration	Transmitter	pH [ne Turbid	ity 🛮 Flow 📋	Other:			
Input/Standard			As Foun		As Left				
		Actual Value		% Accuracy		% Accuracy			
4	.4cm	4.3cm		97.72%	4.4cm	100%			
Material U	sed:	% Accur	racy Calcu	 ulation => ABS (/	 (Actual Value/Standa	rd) –1] x 100%)			
Quantity	Part #	!			Description				
		···							
		4							
Comments:									
Performed 1			neight o	f water at flum	ne compared to r	neasurement on			
Name:	Blake Dic	kinson		Signature:	1				



Location:	Cochrane WWTP							
ORG #			Work	Order #:		MILES - 18		
Instrument:		HACH	ОСМ Т	ransmitter - Cont	act Flow			
OCWA ID:_			s	erial #:	1208590051	76		
Start Day/Ti	tart Day/Time: 15 / 09 / 20 @			and Day/Tim	e: 15 / 09 / 20 DD/MM/YY	@ 11:15 .		
	s:1	24nour clock			DD/MM/YY DUTS:1/4	24hour clock		
	ork Order:							
✓ Scheduled	Maintenance	Corrective Work Order						
	t Type: Transmitter See Re				ity	Other:		
	/Standard		s Foun		As Left			
		Actual Value		% Accuracy	Actual Value	% Accuracy		
2	2.0cm	22.4cm		98.21%	22.0cm	100%		
Material U	sed:	% Accura	cy Calcı	lation => ABS([(Actual Value/Standar	d) -1] x 100%)		
Quantity	Part #			14.5-4.5-4	Description			
Comments	:				71 79.00V			
Performed 1		n. Measured he	eight o	f water at flum	e compared to m	easurement on		
Name:	Blake Dic	kinson		Signature:	1			



Location:	Cochrane WWTP						
	Work Order #:						
nstrument:			issolved Oxygen I				
OCWA ID:		s	erial #:	16090000	3927		
tart Day/Time: 15 / 09 / 2	20 @ 11:45 24hour clock	E	and Day/Tim	e: 15 / 09 / 20 DD/MM/YY	<u>@</u> 12:00 .		
of Workers: 1				DD/MM/YY Durs:1/4			
Type of Work Order: Scheduled Maintenance	Correc	ctive Wo	ork Order	Other:_			
Instrument Type: Recorder Transmitter Calibration: Tsee				ity 🔲 Flow 🛭	Other: DO		
Input/Standard		everse page for calibration data As Found			s Left		
mpas Startaata		Actual Value			% Accuracy		
Material Used:	% Accura	acy Calcı	ulation => ABS(/	(Actual Value/Stand	ard) -1] x 100%		
Quantity Par	rt #	Description					
1		6r	nm of Distilled w	ater as per calibra	tion instructions		
				0.00			
~							
Comments:				*****			
Shake 6mm (1/4") of wate for probe to stabilize. Begi	r in a beaker for n calibration.	30 sec	onds. Insert p	robe in beaker	above water. Allov		
Instrument Passed Calibra	ation.						
In good working order.							
Name: Blake [Dickinson		Signature:				



Location:			Coch	rane WWTP		707 72	
ODC "			_Worl	« Order #:			
Instrument:		P	ortable D	issolved Oxygen			
OCWA ID:_				Serial #:	160900003927		
Start Day/Time: 22 / 12 / 20 DD/MM/YY 4 of Workers: 1 1		@ 11 : 1: 24hour cłock	End Day/Tim		DD/MM/YY	@ 11:30 24hour clock	
Type of Work Order: Scheduled Maintenance		Corre	ctive W	ork Order	Other:		
Instrument Recorder	Type:	□рН [] Chlori	ne 🔲 Turbid	ity 🔲 Flow 🔟 🤇	Other: DO	
Calibration		verse page fo					
Input/S	Standard	As Fo			As I		
		Actual Value		% Accuracy	Actual Value	% Accuracy	
					A STATE OF THE STA		
Material Us	sed:	% Accur	acy Calci	ulation => ABS(/	(Actual Value/Standara	l) -1] x 100%)	
Quantity	Part #			Description			
1				6mm of Distilled water as per calibration instructions			
					•••		
Comments:						•••••	
for probe to s	(1/4") of water in stabilize. Begin o	a beaker for alibration.	'30 sec	conds. Insert p	robe in beaker ab	ove water. Allov	
Instrument Pa	assed Calibratio	n,					
In good work	ing order.					E	
Name:	Blake Dicl	kinson		Signature	/ = /	>	