



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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June 15, 2013

Town of Fort Frances
320 Portage Avenue
Fort Frances Ontario
P9A 3M5

Attention: Mr. Doug Herr
Environmental and Facilities Superintendent

Dear Doug:

Re: Fort Frances Wastewater Treatment Facility
May 2013 Monthly Report

As per the operating agreement, the attached document is the May 2013 monthly report for the Fort Frances Wastewater Treatment Facility.

The report highlights the influent and effluent quality and the process parameters. Additionally, the routine operation and maintenance activities conducted by the operators are summarized.

If you have any questions regarding this report do not hesitate to contact Mr. Larry Wachter – Operations Manager.

Yours truly,

A handwritten signature in black ink, appearing to read 'Kelly C'. The signature is written in a cursive, flowing style.

Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
May 2013 Monthly Operations Report**

INTRODUCTION

In accordance with the Agreement between the Ontario Clean Water Agency (Operating Authority) and the Town of Fort Frances, the Fort Frances Sewage Treatment Plant is required to prepare a monthly report. This document covers the reporting month of May 2013; the facility performance report summarizes important information regarding the quality of the effluent, wastewater, analytical test results, maintenance operations, and relevant activities of the WWTP.

DESCRIPTION OF WORKS

Capacity of Works	9000 m ³ /day (average flow)
Service Area	Town of Fort Frances and Couchiching Reserve
Service Population	9000
Effluent Receiver	Rainy River
Major Process	Secondary treatment facility complete with a phosphorus removal system; ultra violet disinfection; aerobic sludge stabilization and dewatering

The Fort Frances Sewage Treatment Plant received and operates its operation under *Certificate of Approval Number 3-0049-96-006*, in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval outlines the terms and conditions and the report captures these terms and conditions in the following sections.

LABORATORY

ALS Laboratory Group – Thunder Bay is contracted to conduct the required analytical tests of the influent (raw) and effluent samples; weekly requirement.

MAY 2013 EFFLUENT QUALITY

<i>Parameters</i>	<i>Monthly Actual Concentration mg/L</i>	<i>Compliance Criteria Concentration mg/L</i>	<i>Performance Objective Concentration mg/L</i>	<i>Monthly Actual Loading, kg/d</i>	<i>Compliance Criteria Loading kg/d</i>	<i>Performance Objective Loading kg/d</i>
CBOD ₅	2.2 mg/L	25 mg/L	15 mg/L	26.8 kg/d	225 kg/d	135 kg/d
Suspended Solids	8.9 mg/L	25 mg/L	15 mg/L	115.1 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.30 mg/L	1.0 mg/L	1.0 mg/L	3.76 kg/d	9 kg/d	9 kg/d
Ammonia as N	2.37 mg/L					
Nitrite as N	.16 mg/L					
Nitrate as N	3.39 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli		16.6 count/100 ml (geometric mean)		200 cnt/100ml (geometric mean)		E-coli not to exceed 150 organisms/100ml (monthly geometric mean density)
pH			pH range 7.6 to 7.7; average pH was 7.7			
Temperature degrees C			Temperatures ranged from 7.0-9.5 average temperature of effluent at 9.7			

Compliance criteria are mandatory requirements of the C of A and performance objectives are a goal to be achieved using best reasonable efforts.

WASTEWATER LIQUID PROCESS

The average daily flow for May was 11,001.0 m³/day; representing 122% of the design average flow. Total treated flow for the month was 341,032 m³. An additional 4640.3 m³ bypassed the treatment plant. Although some extreme hydraulic loads were experienced, the Fort Frances WWTP met all effluent compliance criteria for the parameters listed above and additionally was well within the recommended more stringent monthly performance objective levels as outlined in the Certificate of Approval.

INVENTORY

Chemical	End of Month Status	Units
Hypochlorite	420 +/- @ 7.0% + 600 @ 12%	Litres
Alum	18.5 +/- @ 65 %	Cubic meters
Polymer	23 Bags (575 kg)	Bags (25 kg/bag)

MAINTENANCE

The operators performed the routine operations and maintenance at the treatment plant and pumping stations. The activities are highlighted as follows:

Treatment Plant:

- Alternated lead/lag pumps
- Adjusted fluidizing water to head cell and grit snail as needed
- Greased GBT, mechanical bar screen and grit snail. Lubricated drive chain on grit snail and bar screen
- Hot water flushed alum lines
- Regular cleaning of head works EW basket strainer
- Exercised portable generators
- Pulled and cleaned RAS pump 2
- Greased all blowers
- Regular cleaning of seal water strainer on TFP 9-5
- Replaced belt ASU 01
- Replaced belt head works exhaust fan 03
- Flushed digester level sensor
- Cleaned the launder channel weirs both clarifiers
- A tire was repaired on the John Deere tractor
- Blower 3 has been sent out for repair

Pump Stations:

- Ran all gen sets
- Cleaned all seal water strainers
- Pulled and cleaned pumps 1 & 2 at Church street lift station
- Repaired wire connection on a capacitor Church street lift station
- A communication line that had been cut by a Bell employee was repaired by Bell
- Back flushed pump 1 at White Pine lift station
- Pulled and cleaned pump 1 at Central Avenue lift station

OPERATIONAL ISSUES

The plant did not meet the compliance criteria for effluent suspended solids or total phosphorous on May 20th but monthly averages were well within the compliance criteria and performance objectives for all parameters.

SLUDGE SUMMARY

The volume directed to the gravity belt thickener totaled 645.3 m³ for the month. Hammond Landscaping (Certificate of Approval Hauler # 11000025801) hauled/transported 233.2 m³ (average 11.1 m³/load) to the agricultural drying bed. The Organic Soil Conditioning site has a valid Certificate of Approval - number S-71048-31.

COMPLAINTS

There were no complaints in the report period.

BY-PASS REPORT(S)

There was one by-pass event during the report period due to high hydraulic loads brought on by rainfall events. The bypass report is available at the plant.

COMMENTS

Plant power consumption for the month was 603 (x 180 multiplier) kWh. Annual fire extinguisher and emergency lighting inspections were completed.

REPORTS

ALS – Environmental Analytical Reports (on-file at plant)
Fort Frances WPCP Equipment Run Time Report (on-file at plant)
Bypass Report (on-file at plant as per occurrence)

Month	Sewage Flows Year 2013						Usage			Sludge			Removal Efficiency		
	Avg. Day	Max Day	Total	Total	Total	Total	% Plant			Volume			CBOD5		
	Flow	Flow	Treated	ByPass	Volume	Capacity			Hauled				Suspended Solids		
	m3	m3	Volume ML	Volume ML	ML				M3				Total Phosphorus		
January	4781.7	5473	148234		148234	53%			208.6						
February	4686.2	5427	131213		131213	52%			183.5						
March	4576.3	5880	141866		141866	51%			191.0						
April	6452.2	12672	193567		193567	72%			250.1						
May	11001.0	21372.0	341032		345672.3	122%			233.2						
June						0%									
July						0%									
August						0%									
September						0%									
October						0%									
November						0%									
December						0%									
Sum				4640.3	960552.3				1066.4						
Average	6299		191182		192110	70%			213.28						
Max		21372	341032		345672.3										
C of A	9000	18000													

	CBOD5			Suspended Solids			Total Phosphorus			E. Coli	pH	
	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Avg. Raw	Avg. Eff.	Avg. Load	Geo Mean	Monthly	Monthly
Month	CBOD	CBOD	CBOD	S.S	S.S	S.S	T.P	T.P	T.P	Counts	Minimum	Maximum
	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	(mg/L)	(mg/L)	(kg/day)	/100ml		
January	78.5	2.1	10.0	125.0	4.2	20.3	2.6	0.26	1.23	5.1	7.4	7.7
February	93.3	2.5	12.0	166.0	6.7	31.8	3.0	0.27	1.30	7.8	7.3	7.6
March	70.7	3.4	15.1	139.9	5.8	26.7	2.7	0.31	1.41	4.4	7.3	7.6
April	53.6	2.7	19.2	143.3	10.2	82.2	2.1	0.30	2.30	22.9	7.4	7.8
May	23.3	2.2	26.8	65.4	8.9	115.1	1.0	0.30	3.76	16.6	7.6	7.7
June												
July												
August												
September												
October												
November												
December												
Average	63.9	2.6	16.6	127.9	7.2	55.2	2.3	0.29	2.00	11.4	7.4	7.7
Max	93.3	3.4	26.8	166.0	10.2	115.1	3.0	0.31	3.76	22.9	7.6	7.8
C of A		25	225		25	225		1	9	150	6	9.5