Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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RECEIVED
SEP 2 2014
TOWN OF FORT FRANCES

August 7, 2014

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
July 2014 Monthly Report

As per the operating agreement, the attached document is the July 2014 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,

Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
July 2014 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 July 2014; 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.

JULY 2014 EFFLUENT QUALITY

Parameters	***Monthly Actual Concentration* mg/L**	***Compliance Criteria Concentration* mg/L**	***Performance Objective Concentration*** mg/L	***Monthly Actual Loading, kg/d***	***Compliance Criteria Loading kg/d***	***Performance Objective Loading* kg/d**
$CBOD_5$	2.5 mg/L	25 mg/L	15 mg/L	23.3 kg/d	225 kg/d	135 kg/d
Suspended Solids	7.4 mg/L	25 mg/L	15 mg/L	68.2 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.34 mg/L	1.0 mg/L	1.0 mg/L	3.1 kg/d	9 kg/d	9 kg/d
Ammonia as N Nitrite as N Nitrate as N	1.65 mg/L 0.14 mg/L 4.73 mg/L					
Total Cl_2 Residual		<0.01 mg/L (when in use)				
E-Coli		11.6 count/100 ml (geometric mean)		200 count/100ml (geometric mean)		E-coli not to exceed 150 organisms/100ml (monthly geometric mean density)
pH				pH range 7.1 to 7.8; average pH was 7.5		
Temperature degrees C				Temperatures ranged from 12.0 – 14.5 average temperature of effluent at 13.2		

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 July was 9,034.0 m^3 /day. This represents 100% of the design average flow. Total treated flow for the month was 280,055 m^3.
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	500 +/-@ 12.0% + 410 @ 12%	Litres
Alum	13 +/- @ 60 %	Cubic meters
Polymer	29 Bags (725 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
- Regular cleaning of head works EW basket strainer
- Greased all blowers
- Regular cleaning of seal water strainer TFP 9-5
- Calibrated automatic samplers and replaced tubing influent sampler
- Shoveled sand from head works inlet channel
- Cleaned DO probes
- Changed oil blowers 2 and 4
- Installed 2 new gas heads in head works building
- Replaced rear tires on John Deere tractor
- Cleaned headcell inlet
- Removed debris from teacup and snail
- Rotated wear bars grit snail
- Installed new pH electrode in lab

Pump Stations:

- Ran gen sets
- Changed seal water strainers
- Cleaned bar screens
- Replaced the sump pump in Central Avenue lift station dry well

OPERATIONAL ISSUES

The facility met all operational requirements for the month.

SLUDGE SUMMARY

The volume directed to the gravity belt thickener totaled 682.8 m3 for the month. Hammond Landscaping (Certificate of Approval Hauler # 11000025801) hauled/transported 187.4 m3 (average 11.0 m^3/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 during the report period.

BY-PASS REPORT(S)

There were no bypass events in the report period.

COMMENTS

Plant power consumption for the month was 679 (x 180 multiplier) kWh.
The additional effluent testing that is required as of January 1, 2013 to meet the requirements of the Wastewater Systems Effluent Regulations is now a part of our regular sampling regimen.

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	Avg. Day Flow m3	Sewage Flows Year 2014 Max Day Flow m3	Total Treated Volume ML	Total ByPass Volume ML	Total Volume ML	Usage % Plant Capacity	Sludge Volume Hauled M3	Removal Efficiency CBOD5 Suspended Solids Total Phosphorus
January	5057.6	5552	156785		156785	56%	143.5	
February	5630.1	6812	157644		157644	63%	129.8	
March	8118.8	10455	251682		251682	90%	217.9	
April	10927.7	14036	327830		327830	121%	198.3	
May	10855.8	18381	336530		336530	121%	243.5	
June	14683.4	21000	440501	33807.4	474308.4	163%	286.8	
July	9034.0	13527	280055		280055	100%	187.4	
August						0%		
September						0%		
October						0%		
November						0%		
December						0%		
Sum				33807.4	1984834.4		1407.2	
Average	9187		278718		283548	102%	201.0	
Max		21000	440501		474308.4			
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	76.0	3.7	18.2	147.0	7.3	36.8	2.2	0.20	1.02	2.8	7.2	7.7
February	88.3	4.3	23.2	146.9	7.4	42.6	2.6	0.18	1.02	10.4	7.2	7.5
March	49.8	5.0	42.4	183.0	12.2	102.0	1.6	0.18	1.42	11.9	7.3	7.5
April	40.6	3.0	31.3	92.5	9.1	93.2	1.2	0.25	2.80	29.6	6.9	7.6
May	36.3	4.0	46.7	78.6	7.6	81.2	1.1	0.36	3.8	36.0	7.2	7.7
June	23.8	3.5	49.0	85.4	7.6	113.7	0.8	0.37	5.30	155.7	7.0	7.8
July	39.2	2.5	23.3	107.5	7.4	68.2	1.3	0.34	3.10	11.6	7.1	7.8
August												
September												
October												
November												
December												
Average	50.6	3.7	33.4	120.1	8.4	76.8	1.5	0.27	2.64	36.9	7.1	7.7
Max	88.3	5	49.0	183.0	12.2	113.7	2.6	0.37	5.3	155.7	7.3	7.8
C of A		25	225		25	225		1	9	200	6.0	9.5