



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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October 9, 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
September 2013 Monthly Report**

As per the operating agreement, the attached document is the September 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,

Kelly Cunningham
Senior Operator

For Larry Wachter
Operations Manager

**The Corporation of the Town of Fort Frances
Wastewater Treatment Plant
(Sewage Plant)
September 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 September 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.

SEPTEMBER 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	2.3 mg/L	25 mg/L	15 mg/L	14.6 kg/d	225 kg/d	135 kg/d
Suspended Solids	5.6 mg/L	25 mg/L	15 mg/L	35.9 kg/d	225 kg/d	135 kg/d
Total Phosphorus	0.29 mg/L	1.0 mg/L	1.0 mg/L	1.8 kg/d	9 kg/d	9 kg/d
Ammonia as N	0.33 mg/L					
Nitrite as N	0.06 mg/L					
Nitrate as N	7.04 mg/L					
Total Cl ₂ Residual		<0.01 mg/L (when in use)				
E-Coli	6.0 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 7.4 to 7.8; average pH was 7.6			
Temperature degrees C			Temperatures ranged from 17.0 - 17.5 average temperature of effluent at 17.4			

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 September was 6215.0 m³/day; representing 69% of the design average flow. Total treated flow for the month was 186,449 m³. Although daily effluent SS and Total P. were exceeded on September 25th when clarifier 1 was drained for the annual inspection, the treatment process has proven to be quite resilient since.

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	400 +/- @ 7.0% + 200 @ 12%	Litres
Alum	13.0 +/- @ 65 %	Cubic meters
Polymer	26 Bags (650 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
- Greased all blowers
- Regular cleaning of seal water strainer TFP 9-5
- Pulled, cleaned and gapped impeller RAS pump 2
- Replaced belt ASU-02
- Cleaned the Headcell inlet and Teacup
- Calibrated both automatic samplers
- Adjusted packing TFP 9-5
- Replaced belt EF 03
- Pressure washed polymer mixer and tank
- Removed sand from headworks inlet channel
- Changed oil in clarifier 1 gear drives and adjusted drive chains
- Shoveled sand from clarifier 1 inlet channel
- Drained and inspected clarifier 1 and removed 1 link each side of long collector chain

Pump Stations:

- Ran gen sets
- Changed seal water strainers
- Cleaned bar screens
- Bell was called in to troubleshoot Boundary Rd communication

OPERATIONAL ISSUES

The facility met all operational requirements for the month.

SLUDGE SUMMARY

The volume directed to the gravity belt thickener totaled 608.6 m³ for the month. Hammond Landscaping (Certificate of Approval Hauler # 11000025801) hauled/transported 244.9 m³ (average 11.3 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 during the report period.

BY-PASS REPORT(S)

There were no by-pass events in the report period.

COMMENTS

Plant power consumption for the month was 613 (x 180 multiplier) kWh.

All MCCs and transformers and panels were inspected by B.A. Norris Electric for loose connections and hot spots. As follow up, a transformer will be replaced in the headworks building and the panel manufacturer was contacted regarding the colour of some panel buses that were found to be ok.

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)

