



2017 WASTEWATER SUMMERY REPORT

WASTEWATER TREATMENT AND COLLECTION

JANUARY 1, 2017 THROUGH DECEMBER 31, 2017

PUBLIC WORKS DEPARTMENT - TOWN OF ST. MARYS



FACILITY FACTS

Facility: *Anoxic/Oxic Biological Nutrient Removal (A/O BNR) System with Integrated Sludge Management*

ECA: 4934-AH9S98 (issued February 24, 2017)

Design Capacity:

Average Daily Flow: 5,560 m³/day

Peak Daily Flow: 14,250 m³/day

Facility Classification

Treatment Plant: Wastewater Treatment 3 [WWT3] (Revised Sept. 7, 2017)

Collection System: Wastewater Collection 2 [WWC2]

Receiving Water: Thames River – North Branch

Table of Contents

1.0	SYSTEM OVERVIEW	4
2.0	SUMMARY OF MONITORING DATA.....	6
2.1	Wastewater Monitoring.....	6
3.0	EFFLUENT QUALITY ASSURANCE	12
4.0	MAINTENANCE ACTIVITIES [PLANNED / UNPLANNED]	12
5.0	FUTURE ALTERATIONS	13
6.0	CALIBRATION AND MAINTENANCE PROCEDURES	13
7.0	BIOSOLIDS.....	13
8.0	BY-PASS, SPILLS OR ABNORMAL DISCHARGE	14
9.0	NOTICE OF MODIFICATIONS.....	14
10.0	REMOVAL RATES	14

APPENDIX A	MONITORING DATA
APPENDIX B	WMS REPORT
APPENDIX C	NOTICE OF MODIFICATIONS

1.0 SYSTEM OVERVIEW

The St. Marys Wastewater Treatment Plant completed a Sludge Management Upgrade in 2010. The upgrade included conversion of the existing extended aeration activated sludge type system to an anoxic/oxic biological nutrient removal system with integrated sludge management. The system consists of the following:

Raw Sewage Conveyance:

Raw sewage typically flows by gravity throughout the system to the wastewater treatment plant. Where gravity flow is not possible due to elevation restrictions, raw sewage flows by gravity to each of the three pump stations that service the Town of St. Marys and from there is pumped to the wastewater treatment plant. The three pump stations are located as follows:

- Emily Street Pump Station consisting of 2, 30 HP pumps controlled by floats with high level float alarm.
- Robinson Street Pump Station consisting of 2, 7.5 HP pumps controlled by milltronics with high level float alarm and an emergency back-up generator.
- Queen Street Pump Station consisting of 2, 10 HP pumps controlled by milltronics with high level float alarm and an emergency back-up generator.

Inlet Works:

Sewage flows from the collection system and the three pump stations into the wet well through automatic bar screens then through a grit tank and communitor, the grit is conveyed to a bin sent to landfill. Sewage then flows by sewer piping to the anoxic tanks.

Anoxic Tanks:

Sewage is split between two round tanks with submersible mixers.

Aeration Tanks:

Sewage enters an inlet chamber where flows are split to three distribution chambers which feed three aeration basins operating in parallel. In 2015 there was a 150 HP turbo blower installed to provide a minimum 2,506 m³ of air/hour to replace one of the centrifugal blowers.



Secondary Clarifiers:

Sewage is split in to four centre feed round clarifiers, two of which are presently in operation. During high flow conditions the other two clarifiers are put into service. Return activated sludge collected here can be transferred from the clarifiers to the aeration or waste activated equalization tanks which are the holding tanks for the sludge thickening process.

Disinfection and Discharge:

Effluent passes through two ultraviolet lamp arrays containing a total of 112 lamps. A sodium hypochlorite liquid feed system is provided for backup chlorination in the event of UV failure. Final effluent is discharged via pipe to the outfall on the bank of the Thames River.

Biosolids Handling

Waste activated sludge is pumped from the WASEQ tanks (waste activated sludge equalization) into two sludge storage tanks that were previously used as digesters. Supernate is taken off the top of the storage tanks to thicken the sludge. The sludge from these storage tanks is then dosed with polymer and then processed through the centrifuge. The dewatered sludge produced by the centrifuge is then run through the Lystek process. The Biosolids are then mixed with potassium hydroxide in a heated mixing tank and processed.

Product from the mixing tank is pumped to a mixed storage tank equipped with an activated carbon odour control system. Biosolids are loaded to the tanker from an overhead hose. The loading area is equipped with curbing and graded to catch basins tied into the Works.



Lystek Process



Lystek Chemical Feed System

Phosphorus Removal:

One phosphorus removal system capable of processing internal recycle streams consisting of one polymerized aluminum sulphate feed system consisting of two chemical feed pumps discharging into the channel of the outlet of the aeration tanks.

Standby Power

The wastewater treatment plant has an automatic standby generator which will operate the plant when there is a power failure. This allows for manual running of the plant when power outages occur.

2.0 SUMMARY OF MONITORING DATA

The St. Marys Wastewater Treatment Plant was monitored as per the Environmental Compliance Approval #4934-AH9S98.

Detailed monitoring data is supplied in Appendix A.

2.1 Wastewater Monitoring

The raw wastewater is monitored for BOD₅, total suspended solids, total phosphorus, total ammonia nitrogen, alkalinity and total kjeldahl nitrogen weekly by composite sample. E-coli is monitored weekly by a grab sample. Dissolved oxygen, PH and temperature are monitored daily Monday to Friday. The plant was designed based on typical raw water characteristics.

Effluent is sampled on a weekly basis and tested for CBOD₅, suspended solids, total phosphorus and total ammonia nitrogen as a composite sample. A grab sample is taken weekly and tested for E. coli. Unionized ammonia is calculated weekly. These parameters specified in the ECA were analyzed by SGS Lakefield; which is an accredited laboratory in Ontario. In-house tests are conducted by licensed operators for monitoring purposes using Standard Methods and the data generated from these tests is used to determine the treatment efficiency while maintaining process control; these include pH, temperature and DO which is mandatory Monday to Friday as well as phosphorus, ammonia, total suspended solids and settling tests. These tests will help the operators to meet the effluent objectives and limits by adjusting processes.

Refer to **Appendix A** for more detailed monthly results.

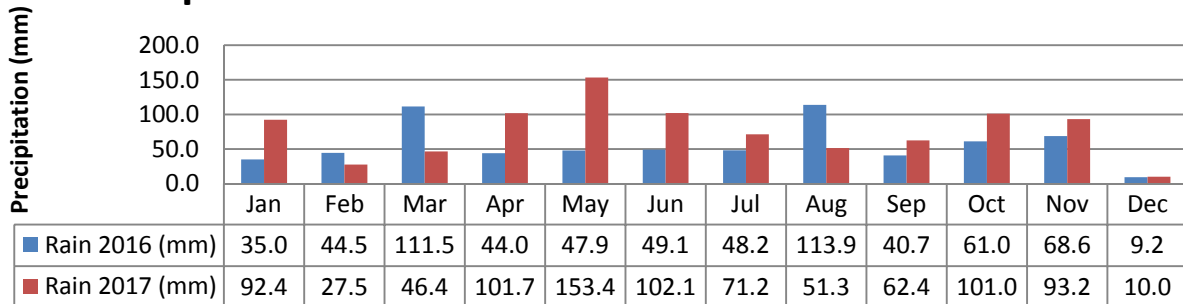
There was a Ministry of Environment and Climate Change Inspection on November 29, 2017. There has not been a finalized report at this time.

The total flow treated at the treatment plant was 1,542,384 m³. The average daily flow for raw wastewater was 4,225.71 m³/d. This represents 76% of the design capacity of 5,560 m³/d. The maximum daily flow was 13,055 m³ which occurred on May 5, 2017. This was related to heavy rains.

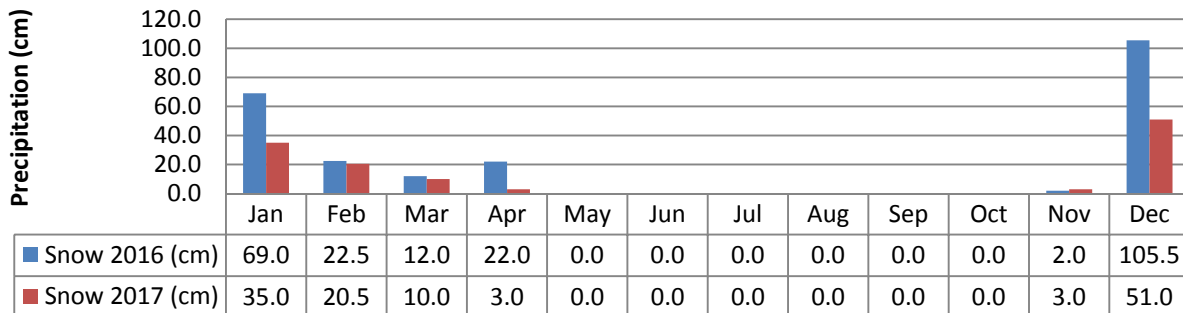
There were 51 instances where the rated capacity of 5,560 m³/day was exceeded, these occurred in the months of January, February, March, April, May, June, July and November and were related to wet weather conditions. The peak flow rate of 14,250 m³ was not exceeded in 2017.

According to the Stratford weather station in 2017, there was a total of 912.6 mm of rain and 673.6 mm in 2016. Total snow in 2017 was 122.5 cm and 233 cm in 2016.

Rain Precipitation

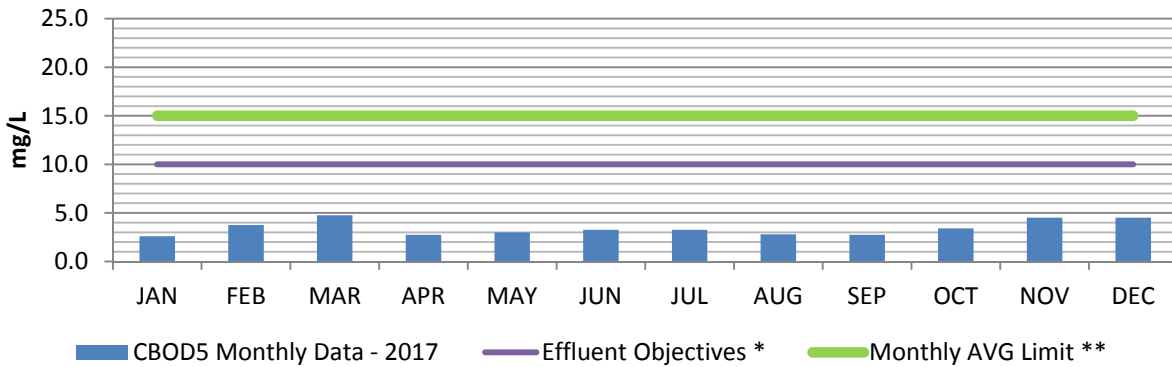


Snow Accumulation

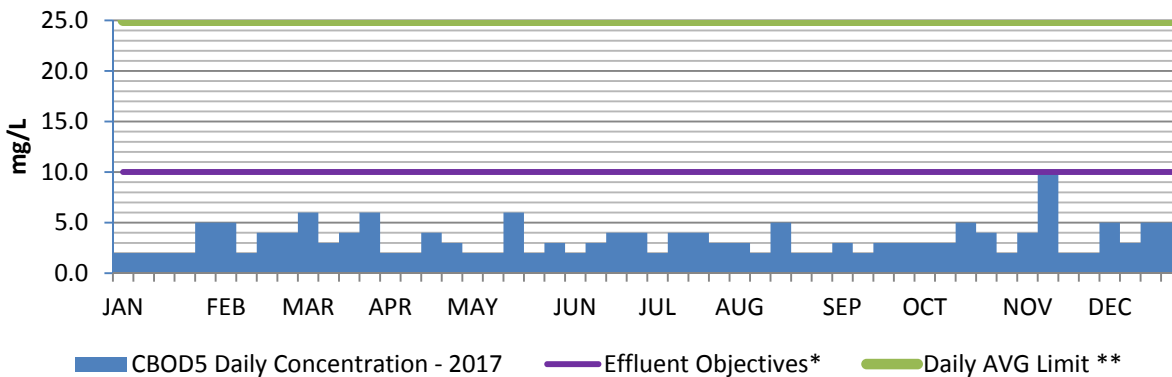


The Wastewater Treatment Plant (WWTP) is designed to handle a soluble BOD of 100 mg/L and a total BOD of 300 mg/L. The annual average raw sewage BOD₅ concentration to the plant was 312.1 mg/L with a maximum daily concentration of 630 mg/L. The annual average final effluent CBOD₅ concentration was 3.9 mg/L with a maximum daily concentration of 10 mg/L.

Effluent - CBOD5 (mg/L) ECA Monthly Limit - 15



Effluent - CBOD5 (mg/L) ECA Daily Limit - 25



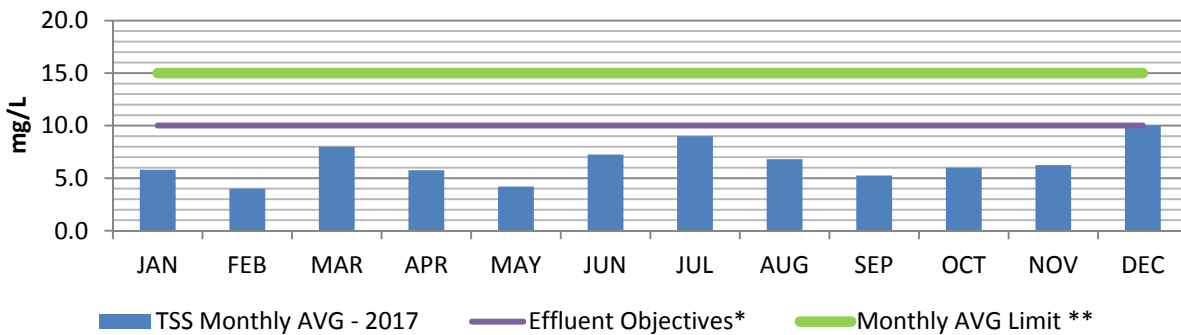
*Objectives – The owner shall use best effort to operate the works with in the objectives

**Limits – The owner shall operate and maintain the works such that the concentrations of the parameters are not exceeded in the effluent

The annual average raw sewage total suspended solids (TSS) concentration to the plant was 216.13 mg/L, with a maximum daily concentration of 772 mg/L. The annual average final effluent TSS concentration was 6.5 mg/L with a maximum concentration of 15 mg/L. Efforts are made by the operators to maintain the solids below the objectives by monitoring the process closely and making adjustments as required.

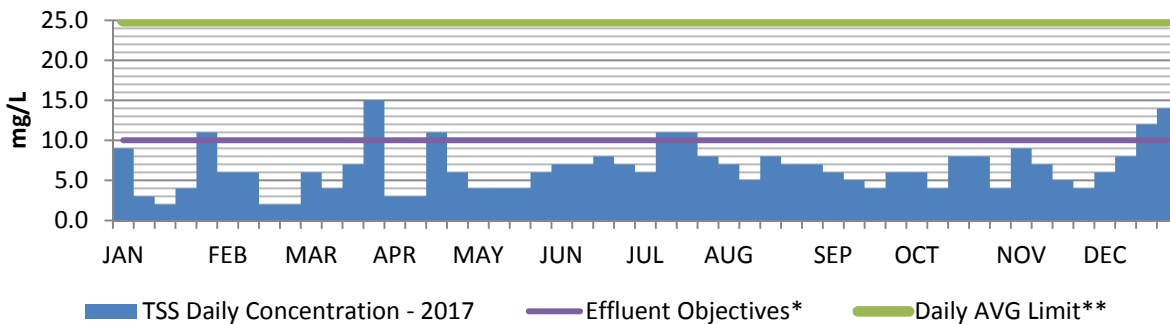
Effluent - Total Suspended Solids (mg/L)

ECA Monthly Limit - 15



Effluent - Total Suspended Solids (mg/L)

ECA Daily Limit - 25



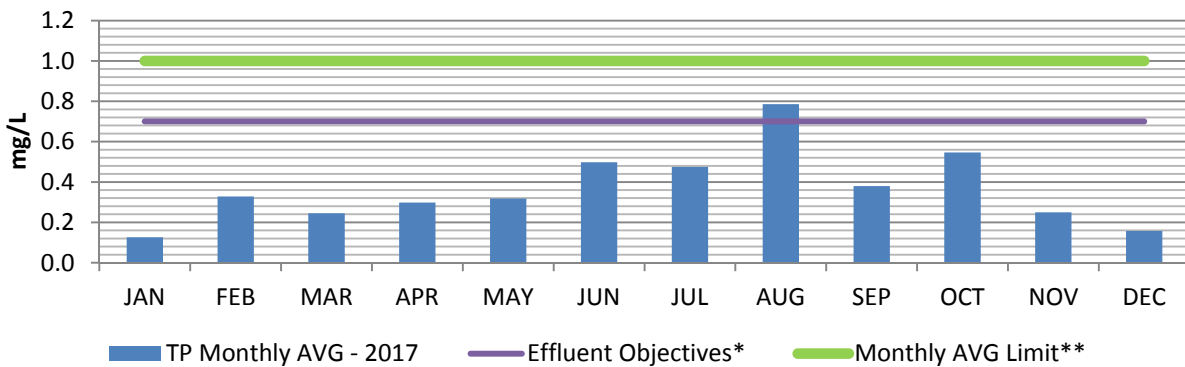
*Objectives – The owner shall use best effort to operate the works with in the objectives

**Limits – The owner shall operate and maintain the works such that the concentrations of the parameters are not exceeded in the effluent

The annual average raw sewage total phosphorus (TP) concentration to the plant was 4.12 mg/L with a maximum daily concentration of 10.7 mg/L. The annual average final effluent TP concentration was 0.37 mg/L with the maximum being 0.92 mg/L. Efforts are made by the operators to maintain the total phosphorus below the objectives by monitoring the process closely and making chemical and process adjustments as required.

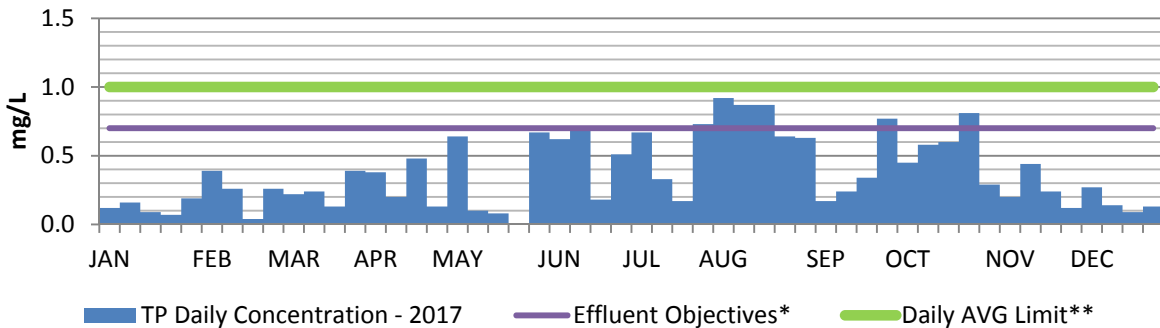
Effluent - Total Phosphorus (mg/L)

ECA Monthly Limit - 1.0



Effluent - Total Phosphorus (mg/L)

ECA Daily Limit - 1.0

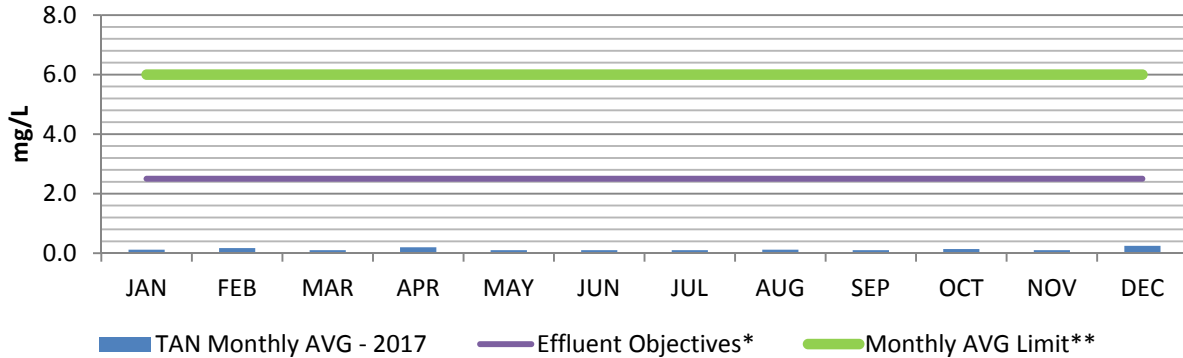


*Objectives – The owner shall use best effort to operate the works with in the objectives

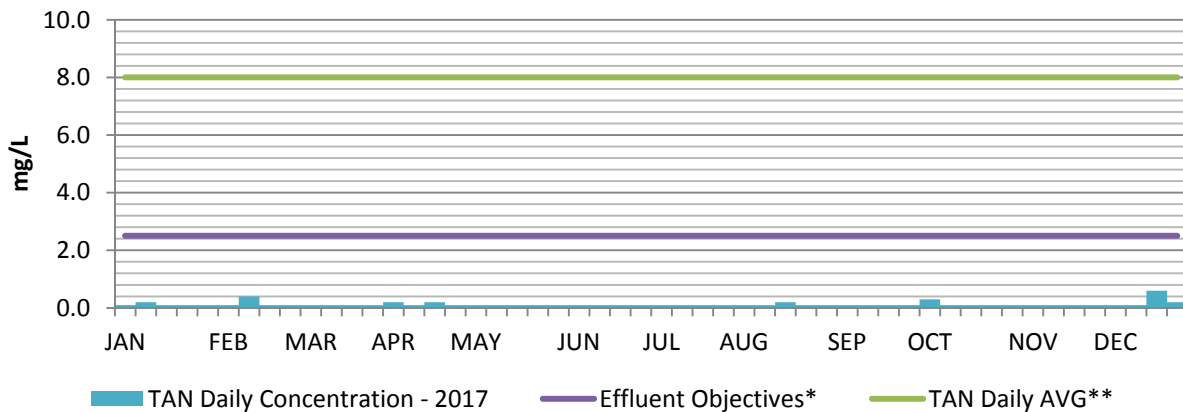
**Limits – The owner shall operate and maintain the works such that the concentrations of the parameters are not exceeded in the effluent

The annual average raw sewage total ammonia nitrogen concentration to the plant was 28.78 mg/L with a maximum daily concentration of 36.7 mg/L. The annual final effluent total ammonia nitrogen concentration was 0.13 mg/L with a maximum daily concentration of 0.60 mg/L.

Effluent - Total Ammonia Nitrogen (mg/L) ECA Monthly Limit - 6.0



Effluent - Total Ammonia Nitrogen (mg/L) ECA Daily Limit - 8.0



*Objectives – The owner shall use best effort to operate the works with in the objectives

**Limits – The owner shall operate and maintain the works such that the concentrations of the parameters are not exceeded in the effluent

There were no formal odour complaints in 2017 however, the Town of St. Marys is aware of odour issues associated with the WWTP and is currently investigating options to reduce odour sources. The Town did receive notice regarding odour concerns from a nearby business, however notice was typically provided after the event which limited ability to investigate and attribute the source to the facility.

3.0 EFFLUENT QUALITY ASSURANCE

Effluent quality assurance is evaluated by monitoring parameters and changes throughout the plant processes. The operators monitor the basins by performing tests on the mixed liquor. These tests include dissolved oxygen, pH, temperature, settling tests, Mixed Liquor Suspended Solids (MLSS). As well, monitoring of the aluminum sulfate dosages and wasting volumes are completed. Data collected from these tests provide valuable information to the operator to make the appropriate adjustments in the treatment process and take corrective actions before the plant reaches its effluent limits.

All in-house monitoring equipment is calibrated based on the manufacturer's recommendations.

Annually a facility sampling schedule calendar is prepared and reviewed with operational staff; the sampling schedule calendar identifies sample collection dates to meet regulatory requirements of the ECA.

4.0 MAINTENANCE ACTIVITIES [PLANNED / UNPLANNED]

Regular scheduled monthly preventative maintenance is assigned and monitored using the Workplace Management System (WMS) program. The Work Management System (WMS) provides the framework of how OCWA manages and plans work such as maintenance and operational activities, and is the framework which is supported within our CMMS. (Computerized Maintenance Management System)

A method to prioritize maintenance requests is required to ensure that the top priority work is being pursued at all times. A method has been developed that balances risk, safety, environmental, customer, operations, financial and urgency factors and can be used by maintenance request initiators, maintenance planners and workers to ensure that the right work is being completed at the right time.

The result of this maintenance work prioritization is a plan for which resources can be prepared and allocated in an efficient manner.

OCWA's WMS uses data to support how work orders are scheduled. Work orders are prioritized according to the following three classifications:

1. **Emergency work** usually involves safety hazards, environmental concerns or major interruption of service. Repairs are generally initiated without waiting for work orders to be processed.
2. **Routine/Preventive maintenance work** does not require prioritizing, as it is always scheduled.
3. **Breakdown/Corrective maintenance work** is prioritized, planned and scheduled into the regular preventive maintenance program.

The preventive maintenance requirement is built into the regular work schedule and corrective maintenance work requests are added to the schedule according to the priority and workload of staff and availability of outside contractors. The following are the number of work orders generated and completed in 2017.

Preventative Maintenance Work Orders Generated

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
50	54	42	49	49	65	46	61	53	47	43	55

For a summary of the maintenance performed please see Appendix B – WMS reports.

5.0 FUTURE ALTERATIONS

The Town of St. Marys, in collaboration with Ontario Clean Water Agency continue to investigate potential future alterations for the facility. Future alterations are being governed by a long term capital needs projection which covers a 20-year planning period. Planned future alterations or upgrades in the next few years consist of, but are not limited to:

- Replace diesel generator to run the sewage plant and administration building;
- Replace the diesel generator at the Queen Street Pump Station;
- Engineering Design for replacement Grit Removal, Odour Control and Administration Building;
- Construction of a new Grit Removal, Odour Control and Administration Building;
- Replace or rehabilitate Supernate well.

6.0 CALIBRATION AND MAINTENANCE PROCEDURES

In 2017 calibrations were completed by Pierce Services and Solutions Inc. for the flow meters at the facility. Pierce also calibrated all hand held and laboratory equipment. The backflow preventers were done by Curney Mechanical. Kone Cranes did the inspection of all lifting equipment/devices. Hetek Solutions Inc. calibrated all gas monitoring equipment and replace faulty sensors as required. Sommers did the inspection of the emergency generator. Mobile Fire and Safety completed the inspection of all fire extinguishers. In-house meters for pH and dissolved oxygen are calibrated by OCWA operators as per manufacturer’s instructions. Other annual maintenance items include annual boiler inspections and UV inspection and maintenance by H2Flow.

Other maintenance that occurred in 2017 include: replaced the transfer switch for Queen St. pump station generator, installation of check valve for return sludge pump, replaced discharge hose for alum pump, replaced/repairs backflow preventers in sludge building, Lystek building and blower building, replaced polymer injector in Lystek building, replaced contactors on relay for pump at Queen St. pump station, replaced heating element and actuator in steam boiler for Lystek, replaced wear rings in activated sludge pumps #1, # 3 and #5, repaired the waterline to activated sludge pump #3, replaced batteries in UPS, repairs to waste activated sludge mixer, re-built raw sewage pump #3, repairs to the chains on the bar screens for the raw sewage, repairs to ventilation system in blower room, installed heat tracing to blower intake to prevent freezing.

7.0 BIOSOLIDS

Biosolids produced at the St. Marys WWTP are from the Lystek System which result in a federally registered fertilizer product. In the summer of 2016, Lystek International Inc. (Lystek) entered into a five (5) year agreement with the Town for marketing and management of the LysteGro fertilizer produced from the facility.

During five (5) application events in the summer and fall of 2017, a total of 3,980 cubic metres of material was land applied. Of that 3,980 cubic metres, 3,408 cubic metres was produced in 2017 with the remaining 472 cubic metres having been produced in 2016 and placed in storage until land application was available. It is estimated that approximately 4000 cubic metres will be produced in 2018. All bio-solids sample analysis was carried out by SGS Lakefield Research Ltd.

The 2017 application season was a success for the St. Marys material which was marketed effectively and applied responsibly as a fertilizer. All hauling and application of material was completed according to best practices in terms of nutrient management and in an economical fashion.

8.0 BY-PASS, SPILLS OR ABNORMAL DISCHARGE

There were no abnormal discharge events for 2017.

9.0 NOTICE OF MODIFICATIONS

Limited operational flexibility allows for the sewage works under the current ECA to do certain modifications to the sewage works in accordance with the Terms and Conditions of the ECA.

There was one Notice of Modification that was prepared in relation to the new 40 HP progressive cavity sludge pump that was installed in the sludge storage tank for sludge removal.

The pump was commissioned on September 28, 2017 and is now operational.

A copy of this notice can be found in **Appendix C** of this report.

10.0 REMOVAL RATES

Removal rates for CBOD₅, TSS, and Total Phosphorus were all 97% or better for 2017.

Removal rates were as follows: CBOD₅ (99.3%), TSS (98.4%) and Total Phosphorus (97.1%).

REPORT PREPARED BY:

Renee Hornick
Senior Operations Manager
Ontario Clean Water Agency

REPORT REVIEWED BY:

Dave Blake, C.E.T.
Environmental Services Supervisor
Town of St. Marys

APPENDIX A

MONITORING DATA

Ontario Clean Water Agency
Performance Assessment Report Wastewater/Lagoon

From: 01/01/2017 to 31/12/2017

Facility: ST MARYS WASTEWATER TREATMENT FACILITY

Works: [110001275]

	01/2017	02/2017	03/2017	04/2017	05/2017	06/2017	07/2017	08/2017	09/2017	10/2017	11/2017	12/2017	<--Total-->	<--Avg.-->	<--Max.-->
Flows:															
Raw Flow: Total - Raw Sewage (m³)	178439.00	134668.00	161225.00	154225.00	181256.00	114943.00	108223.00	93056.00	90649.00	94749.00	123157.00	107794.00	1542384.00		
Raw Flow: Avg - Raw Sewage (m³/d)	5756.10	4809.57	5200.81	5140.83	5846.97	3831.43	3491.06	3001.81	3021.63	3056.42	4105.23	3477.23		4228.26	
Raw Flow: Max - Raw Sewage (m³/d)	11969.00	6633.00	10353.00	7247.00	13055.00	5920.00	6770.00	3469.00	4158.00	3464.00	6225.00	4573.00			13055.00
Eff. Flow: Total - Final Effluent (m³)	175324.00	141919.00	177142.00	180517.00	200202.00	127742.00	120341.00	81941.00	79312.00	90248.00	103722.00	93959.00	1572369.00		
Eff. Flow: Avg - Final Effluent (m³/d)	5655.61	5068.54	5714.26	6017.23	6458.13	4258.07	3881.97	2643.26	2643.73	2911.23	3457.40	3030.94		4311.70	
Eff. Flow: Max - Final Effluent (m³/d)	10030.00	6766.00	9845.00	7694.00	12232.00	5755.00	6444.00	3312.00	2893.00	3763.00	4832.00	3427.00			12232.00
Carbonaceous Biochemical Oxygen Demand: CBOD:															
Eff: Avg cBOD5 - Final Effluent (mg/L)	< 2.600	< 3.750	< 4.750	< 2.750	< 3.000	3.250	< 3.250	< 2.800	2.750	< 3.400	< 4.500	4.500		< 3.442	4.750
Eff: # of samples of cBOD5 - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Loading: cBOD5 - Final Effluent (kg/d)	< 14.705	< 19.007	< 27.143	< 16.547	< 19.374	13.839	< 12.616	< 7.401	7.270	< 9.898	< 15.558	13.639		< 14.750	27.143
Biochemical Oxygen Demand: BOD5:															
Raw: Avg BOD5 - Raw Sewage (mg/L)	242.600	263.500	326.750	285.000	243.800	379.000	370.000	289.600	390.250	407.000	242.250	305.500		312.104	407.000
Raw: # of samples of BOD5 - Raw Sewage (mg/L)	5	4	4	4	5	5	4	5	4	5	4	4	53		
Eff: Avg BOD5 - Final Effluent (mg/L)	< 3.000	< 4.500	< 6.250	< 3.000	3.800	< 3.500	< 4.500	< 3.200	2.750	< 3.600	< 4.000	5.000		< 3.925	6.250
Loading: BOD5 - Final Effluent (kg/d)	< 16.967	< 22.808	< 35.714	< 18.052	24.541	< 14.903	< 17.469	< 8.458	7.270	< 10.480	< 13.830	15.155		< 17.137	35.714
Percent Removal: BOD5 - Raw Sewage (mg/L)	98.763	98.292	98.087	98.947	98.441	99.077	98.784	98.895	99.295	99.115	98.349	98.363			99.295
Total Suspended Solids: TSS:															
Raw: Avg TSS - Raw Sewage (mg/L)	202.000	248.000	193.250	218.500	222.200	240.800	210.750	228.800	201.500	157.800	184.250	285.750		216.133	285.750
Raw: # of samples of TSS - Raw Sewage (mg/L)	5	4	4	4	5	5	4	5	4	5	4	4	53		
Eff: Avg TSS - Final Effluent (mg/L)	5.800	4.000	8.000	5.750	4.200	7.250	9.000	6.800	5.250	6.000	6.250	10.000		6.525	10.000
Eff: # of samples of TSS - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Loading: TSS - Final Effluent (kg/d)	32.803	20.274	45.714	34.599	27.124	30.871	34.938	17.974	13.880	17.467	21.609	30.309		27.297	45.714
Percent Removal: TSS - Raw Sewage (mg/L)	97.129	98.387	95.860	97.368	98.110	96.989	95.730	97.028	97.395	96.198	96.608	96.500			98.387
Total Phosphorus: TP:															
Raw: Avg TP - Raw Sewage (mg/L)	3.318	3.363	2.930	3.433	3.376	4.564	4.623	4.362	4.903	5.018	4.048	5.472		4.117	5.472
Raw: # of samples of TP - Raw Sewage (mg/L)	5	4	4	4	5	5	4	5	4	5	4	4	53		
Eff: Avg TP - Final Effluent (mg/L)	0.126	0.328	0.245	0.298	0.318	0.498	0.475	0.786	0.380	0.546	0.250	0.158		0.367	0.786
Eff: # of samples of TP - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Loading: TP - Final Effluent (kg/d)	0.713	1.660	1.400	1.790	2.054	2.118	1.844	2.078	1.005	1.590	0.864	0.477		1.466	2.118
Percent Removal: TP - Raw Sewage (mg/L)	96.203	90.260	91.638	91.333	90.581	89.099	89.724	81.981	92.249	89.119	93.823	97.122			97.122
Nitrogen Series:															
Raw: Avg TKN - Raw Sewage (mg/L)	25.580	25.050	23.550	23.000	23.240	30.200	29.925	32.500	31.325	33.300	28.250	39.400		28.777	39.400
Raw: # of samples of TKN - Raw Sewage (mg/L)	5	4	4	4	5	5	4	5	4	5	4	4	53		
Eff: Avg TAN - Final Effluent (mg/L)	< 0.120	< 0.175	< 0.100	< 0.150	< 0.100	< 0.100	< 0.100	< 0.120	< 0.100	< 0.140	< 0.100	< 0.250		< 0.130	< 0.250
Eff: # of samples of TAN - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Loading: TAN - Final Effluent (kg/d)	< 0.679	< 0.887	< 0.571	< 0.903	< 0.646	< 0.426	< 0.388	< 0.317	< 0.264	< 0.408	< 0.346	< 0.758		< 0.549	< 0.903
Eff: Avg NO3-N - Final Effluent (mg/L)	8.748	8.220	7.490	6.753	5.820	6.150	5.738	6.636	4.733	5.634	6.998	7.180		6.675	8.748
Eff: # of samples of NO3-N - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Eff: Avg NO2-N - Final Effluent (mg/L)	< 0.066	< 0.053	0.055	< 0.055	< 0.030	< 0.030	< 0.040	< 0.030	< 0.175	< 0.084	< 0.035	< 0.183		< 0.070	0.183
Eff: # of samples of NO2-N - Final Effluent (mg/L)	5	4	4	4	5	4	4	5	4	5	4	4	52		
Disinfection:															
Eff: GMD E. Coli - Final Effluent (cfu/100mL)	20.373	18.795	9.272	2.828	9.551	3.776	3.130	4.919	2.000	9.579	9.587	10.767		8.715	20.373
Eff: # of samples of E. Coli - Final Effluent (cfu/100mL)	5	4	4	4	5	5	4	5	4	5	4	4	53		

Final Effluent / Dissolved Oxygen: DO - mg/L																
Count	21	19	23	19	22	22	20	22	20	21	21	19	249			
Max	18.1	18.0	20.0	24.4	21.1	13.5	8.9	8.9	11.3	13.5	16.9	18.7			24.4	
Mean	16.6	16.3	16.3	16.2	14.4	10.8	7.7	7.6	9.0	11.5	13.5	14.4		12.8		
Min	14.9	14.1	13.9	10.8	10.5	7.5	6.1	6.6	6.6	8.8	11.0	11.8				
Final Effluent / pH																
Count	21	19	23	19	22	22	20	22	20	21	21	19	249			
Max	8.1	7.7	8.1	7.9	7.9	8.0	8.8	8.2	22.1	8.2	7.3	7.4				
Mean	6.9	7.3	7.3	7.3	7.5	7.5	7.6	7.2	8.2	7.2	7.0	7.2				
Min IH	6.6	7.0	6.7	6.7	7.0	7.1	7.1	6.9	6.1	6.9	6.8	7.0				
Final Effluent / Temperature - °C																
Count	21	19	23	19	22	22	20	22	20	21	21	19	249			
Max	16	15	19	17	25	23	25	23	23	22	18	19				
Mean	14	13	14	14	16	20	22	21	21	18	15	15				
Min	11	10	11	12	11	17	19	19	18	16	11	13				

APPENDIX B

WMS REPORT

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
222792	Sampler 01 Raw Influent Service (1y) 5520	5520-WWSM-P-PC	0000277891	TANGEN01-A
222990	Blower Centrifugal 02 Aeration Insp/Service (1y) 5520	5520-WWSM-P-ST-AERA	0000065473	BLOWER06
222998	Blower Centrifugal 03 Aeration Insp/Service (1y) 5520	5520-WWSM-P-ST-AERA	0000065477	BLOWER06
223009	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
223014	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
223019	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
223363	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
223368	Supervisor Spot Checks (3m) 5520	5520-WWSM		H&SINS06-A
223370	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
223375	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
223380	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
223385	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
223390	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
223395	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
223400	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
223405	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
223858	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
223877	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
223889	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
223899	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
223909	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
223919	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
223926	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
223933	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
223952	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
223962	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
223972	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
223982	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
223988	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
224412	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
224519	OG35 FEP Review (1y) 5520	5520-WWSM		FEPREV01-A
224559	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
224575	Flame Arrestor Service (1y) 5520	5520-WWSM		FLAMEARR-A
224589	Operation SOP Manual Review and Update (2y) 5520	5520-WWSM		SOPREV01-B
224668	WHMIS/MSDS/NSF Review and Update (1y) 5520	5520-WWSM		NSFREV01-A
225095	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
242368	Review General Data WISKI (3m) 5520	5520-WWSM		GENDAT01-Q
242425	WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
250387	Lifting Device Route (1y) 5520	5520-WWSM		LIFDEV01-A
250547	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
250552	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
250557	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
250562	Pump Cent Sludge Loading Insp/Service (1y) 5520	5520-WWSM-P-SH-DGST	0000065313	PUMCEN09A
250852	MSDS Review - (6m) 5520	5520-WWSM		MSDSREV01
250859	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
250864	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
250869	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
250874	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
250879	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
250884	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
250889	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
250894	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
250899	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
251338	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
251357	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
251369	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
251379	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
251389	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
251399	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
251406	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
251413	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
251432	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
251442	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
251452	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
251462	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
251468	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
251840	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTUR02Q
251964	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
252001	OG111 OCWA' s Fleet Policy Review (1y) 5520	5520-WWSM		FACOG111
252052	OG109 OCWAs PPE Policy Review (1y) St Marys	5520-WWSM		FACOG109
252261	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
264075	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
265095	WISKI Review (1m) 5520	5520-WWSM		FACREVO1-M
273307	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
273312	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
273317	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
273322	Sampler 01 Auto Effluent Insp/Service (1y) 5520	5520-WWSM-P-PC	0000157008	SAMEFF02
273542	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
273547	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
273552	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
273557	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
273562	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
273567	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
273572	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
273577	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
273582	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
273984	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	000065231	ENGDIE02-M
274003	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	000065330	GRINDER04M
274015	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065403	TANPRO11-M
274025	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065420	TANPRO11-M
274035	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065498	TANPRO11-M
274045	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	000065526	UVREA02-M
274052	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	000065527	UVREA02-M
274059	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	000065531	ENGDIE02-M
274078	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065561	PUMCEN09M
274088	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065563	PUMCEN09M
274098	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	000065585	PUMCEN09M
274108	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUR0TLOB02
274114	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
274485	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
274602	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
274816	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
288199	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
289362	WISKI Review (1m) 5520	5520-WWSM		FACREVO1-M
298416	Conveyor 01 Rake Grit Insp/Service (1y) 5520	5520-WWSM-P-HW	000065331	CONSCR01-A
298426	Mixer 01 Grit Organic Pump Insp/Service (1y) 5520	5520-WWSM-P-HW	000065334	MIXSUB01-A
298432	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	000065544	PANALAO2-M
298437	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	000065226	PANALAO2-M
298442	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	000065211	PANALAO2-M
298447	Screen 01 Detroit Tank Components Insp/Service (1y) 5520	5520-WWSM-P-HW	000065337	SCRTRA00-A
298722	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
298727	Chemical System Flushing (6m) 5520	5520-WWSM		CHEMFLSH01
298730	Supervisor Spot Checks (3m) 5520	5520-WWSM		H&SINS06-Q
298732	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
298737	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
298742	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
298747	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
298752	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
298757	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
298762	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
298767	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
299272	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	000065231	ENGDIE02-M
299291	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	000065330	GRINDER04M
299303	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065403	TANPRO11-M
299313	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065420	TANPRO11-M
299323	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	000065498	TANPRO11-M
299333	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	000065526	UVREA02-M
299340	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	000065527	UVREA02-M
299347	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	000065531	ENGDIE02-M
299366	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065561	PUMCEN09M
299376	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065563	PUMCEN09M
299386	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	000065585	PUMCEN09M
299396	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB-A
299399	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
299777	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
299934	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
299953	OG12 Valve or Meter Chamber Inspection (1y) 5520	5520-WWSM		FACOG12
300290	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
314637	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
315397	Blower Room Cleaning 5520	5520-WWSM-F		
315398	Wasting Sink Insulation Repair 5520	5520-WWSM-F		
315399	Old Chlorine Building Tire Removal 5520	5520-WWSM-F		
315421	UV Building Cleanup 5520	5520-WWSM-F-BG		
315432	Blower Room Basement Cleaning 5520	5520-WWSM-F-BG		
315433	Screens Room Cleaning 5520	5520-WWSM-F-BG		
315434	Blower Room Cleaning 5520	5520-WWSM-F-BG		
315435	UV Building Safety Supply Organization 5520	5520-WWSM-F-BG		
315583	Review General Data WISKI (3m) 5520	5520-WWSM		GENDAT01-Q
315640	WISKI Review (1m) 5520	5520-WWSM		FACREVO1-M
323460	Meter Flow Effluent Bypass Insp/Service (1y) 5520	5520-WWSM-P-PC	0000157005	METFLOO1-A
323465	Meter Flow Fit1 RAS Insp/Service (1y) 5520	5520-WWSM-P-PC	000065597	METFLOO1-A
323470	Meter Flow RAS Insp/Service (1y) 5520	5520-WWSM-P-PC	000065564	METFLOO1-A
323475	Meter Flow Velocity Final Effluent Insp/Service (1y) 5520	5520-WWSM-P-PC	0000157006	METFLOO1-A
323483	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	000065544	PANALAO2-M
323488	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	000065226	PANALAO2-M
323493	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	000065211	PANALAO2-M
323498	Pump Subm P-23 Supernate Insp/Service (1y) 5520	5520-WWSM-P-TT	0000157001	PUMSUB01-A
323507	Pump Subm P-24 Supernate Insp/Service (1y) 5520	5520-WWSM-P-TT	0000157002	PUMSUB01-A
323516	Pump Subm Sludge Loading Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000157004	PUMSUB01-A
323885	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
323890	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
323895	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
323900	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
323905	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
323910	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
323915	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
323920	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
323925	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
324347	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
324366	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
324378	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
324388	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
324398	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
324408	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
324415	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
324422	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
324441	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
324451	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
324461	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
324471	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
324477	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
324853	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2Q
325011	OG15 Facility OHSa Inspection (1m) 5520	5520-WWSM		FACOG15-M
325447	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
344203	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
345343	WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
353738	Analyzer Gas Quad Detector Insp/Service (6m) 5520	5520-WWSM-P-PC	0000207056	ANAGASCL-S
353744	Boiler Industrial Heating Eqmt Insp/Service (1y) 5520	5520-WWSM-F-HV	0000241329	BOILER02A
353750	Boiler Preheat Tank Water Insp/Service (1y) 5520	5520-WWSM-F-HV	0000241328	BOILER02A
353756	Grinder Muffin Monster Bar Insp/Service (1y) 5520	5520-WWSM-P-HW	0000241332	GRINDRO6-A
353759	Meter Flow Digested Sludge Insp/Service (1y) 5520	5520-WWSM-P-PC	0000241336	METFLO01-A
353764	Meter Flow Thickened Was Insp/Service (1y) 5520	5520-WWSM-P-PC	0000241337	METFLO01-A
353769	Mixer Polymer Reactor Insp/Service (1y) 5520	5520-WWSM-P-SH-CHEM	0000241326	MIXSUB01-A
353775	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
353780	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
353785	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
353790	Pump Cent Lystek Prod Pump Insp/Service (1y) 5520	5520-WWSM-P-SH-CHEM	0000241346	PUMCEN09A
353809	Pump Cent Lystek Prod Pump Insp/Service (1y) 5520	5520-WWSM-P-SH-CHEM	0000241347	PUMCEN09A
353828	Pump Cent P225 Booster Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000241330	PUMCEN09A
353847	Pump Peristaltic Chemical Metering Insp/Service (3m) 5520	5520-WWSM-P-SH-CHEM	0000241327	PUMPERO2

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
353864	Pump Prog Cav 01 Thickened Sludge Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000241338	PUMPRO01-A
353867	Pump Subm 01 Queen St Insp/Service (1y) 5520	5520-SPQN	0000065224	PUMSUB01-A
353876	Pump Subm 02 Queen St Insp/Service (1y) 5520	5520-SPQN	0000065223	PUMSUB01-A
353885	Pump Subm Lawn Water Insp/Service (1y) 5520	5520-WWSM-F-BG	0000207052	PUMSUB01-A
353894	Pump Twas Smart Turner Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000241340	PUMCEN11-A
353897	Pump Twas Smart Turner Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000241342	PUMCEN11-A
353900	Tank Hot Water Heater Electric Insp (1y) 5520	5520-WWSM-F-HV	0000241325	TANHOT01-A
354167	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
354172	Spill Kit Inspect (6m) 5520	5520-WWSM		SAFSPL00-S
354174	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
354179	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
354184	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
354189	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
354194	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
354199	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
354204	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
354209	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
354679	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
354698	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
354710	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
354720	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
354730	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
354740	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
354747	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
354754	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
354773	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
354783	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
354793	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
354803	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
354809	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
355216	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
355380	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
355405	OG110 OCWA' s H&S Manual and Policy Review (1y) St Marys	5520-WWSM		FACOG110
355702	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
375625	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
376918	WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
377039	Equipment Maintenance (1m) 5520	5520-WWSM-F		
377167	Blower Building Maintenance 5520	5520-WWSM-F-BG		
386038	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
386043	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
386048	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
386053	Pump Subm 01 Robinson St Insp/Service (1y) 5520	5520-SPRB	0000065205	PUMSUB01-A
386062	Pump Subm 02 Robinson St Insp/Service (1y) 5520	5520-SPRB	0000065206	PUMSUB01-A
386305	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
386310	Supervisor Spot Checks (3m) 5520	5520-WWSM		H&SINS06-Q
386312	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
386317	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
386322	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
386327	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
386332	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
386337	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
386342	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
386347	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
386768	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
386787	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
386799	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
386809	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
386819	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
386829	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
386836	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
386843	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
386862	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
386872	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
386882	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
386892	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
386898	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
387300	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTUR02M
387415	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
387688	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
387853	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
408793	Review General Data WISKI (3m) 5520	5520-WWSM		GENDAT01-Q
408850	WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
408890	Equipment Maintenance (1m) 5520	5520-WWSM-F		
409023	Replace drain cover on roof of WAS and RAW buildings 5520	5520-WWSM-F-BG		
409027	Replacement vent screen in RAS building basement 5520	5520-WWSM-F-BG		
409029	Replacement vent screen in WAS building basement 5520	5520-WWSM-F-BG		
416709	Flame Arrester Route Insp/Service (1y) 5520	5520-WWSM		FLAMEARR-A
416916	Meter Level 01 Robinson St Insp/Service (1y) 5520	5520-SPRB	0000065210	METLEV01-A
416921	Meter Level Raw Sewage Insp/Service (1y) 5520	5520-WWSM-P-PC	0000065240	METLEV01-A
416926	Meter Level Supernate Wet Well Insp/Service (1y) 5520	5520-WWSM-P-PC	0000065283	TNKWETLVL

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
416931	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
416936	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
416941	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
416946	Pump Subm 01 Raw Sewage Insp/Service (1y) 5520	5520-WWSM-P-HW	0000157009	PUMSUB01-A
416955	Pump Subm 02 Raw Sewage Insp/Service (1y) 5520	5520-WWSM-P-HW	0000207051	PUMSUB01-A
416964	Pump Subm 03 Raw Sewage Insp/Service (1y) 5520	5520-WWSM-P-HW	0000157010	PUMSUB01-A
416973	Recorder Chart Methane Gas Insp/Service (1y) 5520	5520-WWSM-P-PC	0000065270	RECCHA01-A
416975	Valve Relief Press Insp/Service (1y) 5520	5520-WWSM-P-TT	0000065358	VALRELDA-A
416978	Valve Relief Press Insp/Service (1y) 5520	5520-WWSM-P-TT	0000065364	VALRELDA-A
416981	Valve Relief Press Insp/Service (1y) 5520	5520-WWSM-P-TT	0000065365	VALRELDA-A
417334	MSDS Review - (6m) 5520	5520-WWSM		MSDSREV01
417341	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
417346	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
417351	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
417356	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
417361	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
417366	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
417371	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
417376	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
417381	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
417833	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
417852	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
417864	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
417874	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
417884	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
417894	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
417901	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
417908	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
417927	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
417937	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
417947	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
417957	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
417963	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
418321	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2Q
418443	OG15 Facility OHSa Inspection (1m) 5520	5520-WWSM		FACOG15-M
418710	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
418928	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
439599	WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
448038	Mixer Subm 01 Sludge Storage Insp/Service (1y) 5520	5520-WWSM-P-SH-PIPE	0000065264	MIXSUB01-A
448044	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
448049	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
448054	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
448271	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
448276	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
448281	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
448286	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
448291	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
448296	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
448301	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
448306	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
448311	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
448751	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
448770	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
448782	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-A
448807	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-A
448832	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-A
448857	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
448864	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
448871	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
448890	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
448900	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
448910	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
448920	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
448926	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
449492	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
449651	OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
449886	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
450053	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
472300	WISKI Review (1m) 5520	5520-WWSM		FACREVO1-M
482076	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
482081	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
482086	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
482091	Pump Cent Aeration Drain Insp/Service (1y) 5520	5520-WWSM-F-BG	0000065639	PUMCEN09A
482542	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
482547	Chemical System Flushing (6m) 5520	5520-WWSM		CHEMFLSH01
482550	Supervisor Spot Checks (3m) 5520	5520-WWSM		H&SINS06-Q
482552	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
482557	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
482562	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
482567	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
482572	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
482577	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
482582	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
482587	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
483162	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
483181	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04A
483197	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
483207	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
483217	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
483227	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVLGTBNK
483246	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVLGTBNK
483265	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
483284	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09A
483303	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09A
483322	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09A
483341	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUR0TLOB02
483347	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
483766	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2M
483915	OG15 Facility OHSa Inspection (1m) 5520	5520-WWSM		FACOG15-M
484363	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
484552	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
506955	Review General Data WISKI (3m) 5520	5520-WWSM		GENDAT01-Q
507012	WISKI Review (1m) 5520	5520-WWSM		FACREVO1-M
516258	Blower Centrifugal 01 Aeration Insp/Service (1y) 5520	5520-WWSM-P-ST-AERA	0000065469	BLOWER05-A
516264	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
516269	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
516274	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
516824	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
516829	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
516834	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
516839	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
516844	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
516849	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
516854	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
516859	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
516864	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
517315	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
517334	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
517346	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
517356	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M

Work Order List

Site: OCWASITE

Work Order	Description	Location:	Asset	Job Plan
517366	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
517376	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
517383	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
517390	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M
517409	Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065561	PUMCEN09M
517419	Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000065563	PUMCEN09M
517429	Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	0000065585	PUMCEN09M
517439	Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
517445	Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
517977	Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTURO2A
518097	OG15 Facility OHSa Inspection (1m) 5520	5520-WWSM		FACOG15-M
518372	Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
518531	Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
541645	WISK1 Review (1m) 5520	5520-WWSM		FACREVO1-M
549681	Analyzer Gas Quad Detector Insp/Service (6m) 5520	5520-WWSM-P-PC	0000207056	ANAGASCL-S
549687	Filter Air 01 Carbon Sludge Insp/Service (1y) 5520	5520-WWSM-P-ST-AERA	0000065259	FILCAR01
549696	Alarm Dialer Testing (1m) 5520	5520-WWSM-P-PC	0000065544	PANALAO2-M
549701	Alarm Dialer 01 Queen PS Testing (1m) 5520	5520-SPQN	0000065226	PANALAO2-M
549706	Alarm Dialer 01 Robinson PS Testing (1m) 5520	5520-SPRB	0000065211	PANALAO2-M
549711	Pump Rot Lobe 01 Digester Insp/Service (1y) 5520	5520-WWSM-P-TT	0000207053	PUMROTLO2
549921	PH Probe Insp/Calib (1m) 5520	5520-WWSM		ANALPH01-M
549926	Spill Kit Inspect (6m) 5520	5520-WWSM		SAFSPL00-S
549928	Do Probe Calibration (1y) 5520	5520-WWSM		ANADO03A
549939	Daily O&M Activities Emily Pumping Station (1m) 5520	5520-SPEM		FACINS01-W
549944	TPM Insp/Maint Emily Pumping Station (1m) 5520	5520-SPEM		FACWKL-M
549949	Daily O&M Activities Queen Pumping Station (1m) 5520	5520-SPQN		FACINS01-W
549954	TPM Insp/Maint Queen Pumping Station (1m) 5520	5520-SPQN		FACWKL-M
549959	Daily O&M Activities Robinson Pumping Station (1m) 5520	5520-SPRB		FACINS01-W
549964	TPM Insp/Maint Robinson Pumping Station (1m) 5520	5520-SPRB		FACWKL-M
549969	Daily O&M Activities St Marys WWTP (1m) 5520	5520-WWSM		FACINS01-W
549974	TPM Insp/Maint St Marys WWTP (1m) 5520	5520-WWSM		FACWKL-M
550450	Engine Diesel Queen St PS Insp/Test (1m) 5520	5520-SPQN	0000065231	ENGDIE02-M
550469	Engine Diesel Queen St PS Insp/Service (1y) 5520	5520-SPQN	0000065231	ENGDIE02-A
550508	Grinder Comminutor 01 Influent Insp/Service (1m/1y) 5520	5520-WWSM-P-HW	0000065330	GRINDER04M
550520	Tank Clarifier 01 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065403	TANPRO11-M
550530	Tank Clarifier 03 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065420	TANPRO11-M
550540	Tank Clarifier 04 Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-CLAR	0000065498	TANPRO11-M
550550	Uv Light Bank 02 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065526	UVREA02-M
550557	Uv Light Bank 01 Effluent Insp/Clean/Service (1m/1y) 5520	5520-WWSM-P-DI	0000065527	UVREA02-M
550564	Engine Diesel St. Mary's WWTP Insp/Test (1m) 5520	5520-WWSM-F-PG	0000065531	ENGDIE02-M

Work Order List

Site: OCWASITE

Work Order Description	Location:	Asset	Job Plan
550583 Engine Diesel St. Mary's WWTP Insp/Service (1y) 5520	5520-WWSM-F-PG	000065531	ENGDIE02-A
550622 Pump Cent 01 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065561	PUMCEN09M
550632 Pump Cent 02 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	000065563	PUMCEN09M
550642 Pump Cent 03 Return Sludge Insp/Service (1m/1y) 5520	5520-WWSM-P-ST-PIPE	000065585	PUMCEN09M
550652 Pump Rot Lobe Insp/Service (1m/1y) 5520	5520-WWSM-P-TT	0000207020	PUROTLOB02
550658 Engine Diesel Robinson St PS Insp/Test (1m) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-M
550677 Engine Diesel Robinson St Insp/Service (1y) 5520	5520-WWSM-F-PG	0000269085	ENGDIE02-A
551068 Blower Cent Turbo Insp/Service (1m/3m/1y) 5520	5520-WWSM-P-ST-AERA	0000269084	BLOTUR02M
551150 Confined Space Hazard Assessment Review (1y) St Marys Cluster	5520-WWSM		CONSPC01-A
551234 OG15 Facility OSHA Inspection (1m) 5520	5520-WWSM		FACOG15-M
551520 Sampling and Testing (1m) 5520	5520-WWSM		SAMPLE01-M
551682 Alarm Dialer 01 Emily St. PS Testing (1m) 5520	5520-SPEM	0000269089	PANALAO2-M
578506 Sampling Calendar Review (1y) 5520	5520-WWSM		SAMPLE02-A
578565 WISKI Review (1m) 5520	5520-WWSM		FACREV01-M
579735 Supervisor Spot Checks (3m) 5520	5520-WWSM		
Number of Records: 455			

APPENDIX C

NOTICE OF MODIFICATIONS



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
ECA Number 4934-AH9S98	Issuance Date (mm/dd/yy) 02/24/17	Notice number (if applicable) N/A
ECA Owner The Town of St. Marys		Municipality The Town of St. Marys

Part 2: Description of the modifications as part of the Limited Operational Flexibility <i>(Attach a detailed description of the sewage works)</i>
<p>The existing Water Pollution Control Plant in St. Marys has several sludge storage tanks which are noted in the current ECA. The ECA also notes a "sump pump". This sump pump was designed to periodically empty the sludge storage tanks into haul trucks and was designed as a 10HP submersible sewage pump that was selected to have a rated capacity of approx. 50L/s. The viscosity of the sludge material is much thicker than water (i.e. viscosity of approx. 4500 centipoise) and as a result the sludge pump was only operating at approx. 10L/s and frequently running into maintenance issues. This pump is being replaced by a 40HP progressive cavity pump designed to operate at approx. 34L/s @ 9.4 m TDH. The pump is manufactured by Netzsch Canada Inc.</p> <p>Drawings and system curve information is available upon request.</p> <p>Description shall include:</p> <ol style="list-style-type: none"> 1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.) 2. Confirmation that the anticipated environmental effects are negligible. 3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable. i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA; 3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name (Print) Ryan P. DeVries	PEO License Number 100183886
Signature 	Date (mm/dd/yy) 09/26/17
Name of Employer B. M. Ross and Associates Limited	

Part 4 – Declaration by Owner	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. 4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name of Owner Representative (Print) Dave Blake	Owner representative's title (Print) Environmental Services Supervisor
Owner Representative's Signature 	Date (mm/dd/yy) 09/27/17