

## BRUSSELS WASTEWATER TREATMENT PLANT

Works # 110002354

# 2024 ANNUAL REPORT OF OPERATIONS

Managed, Operated and Maintained by:

**Jacobs** 

March 4, 2025

Ontario Ministry of Environment, Conservation and Parks 101 17<sup>th</sup> St. East, Owen Sound, Ontario N4K 0A5

MECP District Manager,

On behalf of the Corporation of the Municipality of Huron East, OMI (Jacobs) is pleased to submit to you the annual compliance report for the Brussels Wastewater Treatment Plant. Please feel free to contact the undersigned if you have any questions regarding this report.

Respectfully Submitted,

Christopher Toulouse

Chital

Jacobs - Project Manager

cc: Barry Mills, Director of Public Works, Municipality of Huron East

Shawn Bromley, Operations Manager, Municipality of Huron East

Joe Bloomfield, Area Manager, Jacobs

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#### Introduction:

The Brussels Wastewater Treatment Plant (WWTP) was constructed in 1981. It is classified as a Level 3 Treatment plant and Level 1 Collection system.

OMI (Jacobs) is the Operating Authority for the treatment plant and pump station on behalf of The Corporation of the Municipality of Huron East. The Municipality operates the remainder of the collections system.

The plant has a design capacity of 880 m³/day. The total annual effluent flow for 2024 was 208,022m³, with an average daily flow of 568.37 m³/day or 64.59% of capacity.

The treatment plant operates under ECA # 8777-BXASKC issued February 25, 2021.

The current WWTP is an extended aeration activated sludge plant which consists of grit channels, bar screen, coarse bubble aeration, clarification, cloth media filters and UV disinfection. The works also consists of an aerated biosolids holding tank.

The WWTP has an on-site back-up power generator that operates the plant during an emergency power outage.

MECP performed an Inspection of the Sewage Treatment plant on March 9, 2015.

#### **Pump Stations & Collection System:**

The Brussels Main sanitary pumping station located at 290 Stretton receives raw sewage from a gravity sewer system. The sewage is gravity feed through the collection system to Main Pumping Station, which then pumps flow approximately 560 m to the WWTP.

The Main Pump station is checked five days a week and has alarm monitoring capabilities 24-hour/day. Pump run time hours are documented during the daily checks.

OMI (Jacobs) operates and maintains the pump station, while the Municipality operates the collection system.

#### **SECTION A**

A summary and interpretation of all Influent and Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates.

The Brussels Wastewater Treatment Plant does not currently have any equipment in place to monitor the influent flow rates or totals.

A grab sample of the Influent sewage is collected once per month and analyzed by SGS Laboratories for the parameters: BOD<sub>5</sub>, TSS and TP in accordance with Schedule D of the ECA. The onsite operators routinely collect a grab sample monitoring for pH and temperature.

Historically the influent flow rates increase during storms/heavy rain events and during the spring snow melting/run-off.

Phosphorous and solids removal is achieved by the addition of aluminum sulphate (alum) through a metering pump that deposit the alum directly into the combined receiving channel at the end of the aeration tank. The Alum is stored inside a separate building in a 27.3 m3 insulated tank to prevent it from freezing.

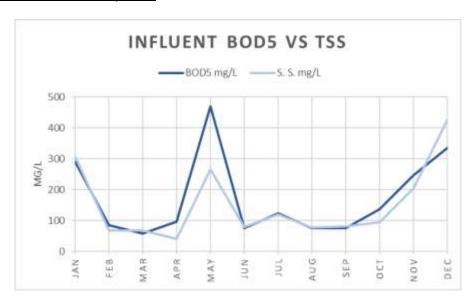


Figure 1: Influent BOD vs TSS Comparison

#### **SECTION 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.

The Treated Effluent is discharged to the Maitland River. The Effluent sampling point is located downstream of the UV system and upstream level control weir.

In accordance with Schedule C and D, an 8-hour composite sample of the Final Effluent is collected monthly and analyzed by SGS Laboratories for the parameters: CBOD<sub>5</sub>, TSS, Total Phosphorous, TAN, and Unionized Ammonia. A monthly grab sample is also collected and analyzed for E-coli by SGS Laboratories. The onsite operator completes analysis of pH, temperature, reactive phosphorous, and dissolved oxygen.

The monthly Lab Data Sheets for the reporting year can be found in Appendix A.

Figure 2: Effluent Objectives and Limits

Effluent Parameter	Effluent Design	Effluent Concentration	Effluent Loading
	Objective	Limits	Limits
CBOD5	10 mg/L	15 mg/L	15 kg/d
Total Suspended Solids	10 mg/L	15 mg/L	15 kg/d
Total Phosphorous	0.2 mg/L (May 1 – Oct 31) 0.3 mg/L (Nov 1 – April 30)	0.3 mg/L (May 1 – Oct 31) 1.0 mg/L (Nov 1 – April 30)	0.3 kg/d (May 1 – Oct 31) 0.9 kg/d (Nov 1 – April 30)
Total Ammonia Nitrogen	3.0 mg/L (Nov 1 – April 30) 1.0 mg/L (May 1 – Oct 31)	2.0 mg/L (May 1 – Sep 30) 3.0 mg/L (Apr, Oct, Nov) 6.0 mg/L (Dec)	2.0 kg/d (May 1 – Oct 31) 2.5 kg/d (Apr, Oct, Nov) 5 kg/d (Dec)
E-coli	100 organisms per 100 mL	200 organisms per 100 mL	
рН	6.5 – 9.0 inclusive	6.5 – 9.0 inclusive	
Dissolved Oxygen	Greater than 5.0 mg/L		

Figure 3: Effluent Monthly/Yearly Concentrations

#### 2024 MONTHLY/YEARLY AVERAGE RESULTS

Brussels W.W.T.P.

Operations Number: 110002354 YEAR: 2024

Operating Authority: Jacobs Municipality of Huron East

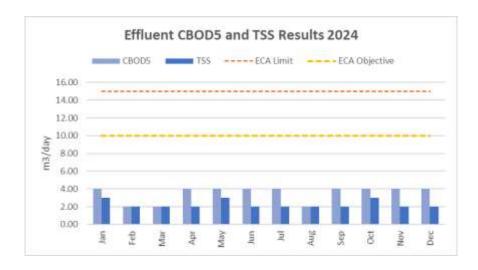
	F	Raw Influer	nt				Final	Effluent			
							Ammonia	Unionized	E-Coli		
	BOD5	S. S.	Total P	CBOD5	S. S.	Total P	NH3	Ammonia	Per	рН	D.O.
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	100 mL		
January	290	308	2.80	4.00	3.00	0.05	0.10	1.02	2.0	7.67	9.48
February	85	67	2.00	2.00	2.00	0.13	0.10	0.67	2.0	7.60	10.08
March	58	67	1.70	2.00	2.00	0.07	0.10	0.67	4.0	7.63	8.95
April	96	40	2.30	4.00	2.00	0.13	0.10	0.50	2.0	7.60	8.42
May	469	265	3.10	4.00	3.00	0.30	0.10	0.96	2.0	7.70	8.53
June	75	80	2.57	4.00	2.00	0.15	0.10	4.59	1.0	7.63	7.05
July	124	119	2.10	4.00	2.00	0.12	0.10	1.45	1.0	7.36	6.98
August	75	78	2.50	2.00	2.00	0.14	0.10	0.97	2.0	7.43	6.78
September	76	82	2.20	4.00	2.00	0.11	0.10	1.29	2.0	7.62	6.40
October	137	94	2.76	4.00	3.00	0.25	0.10	1.50	2.0	7.49	7.26
November	247	205	3.90	4.00	2.00	0.16	0.10	0.70	2.0	7.41	7.20
December	334	425	6.5	4.00	2.00	0.12	0.10	0.57	12.0	7.42	8.06
Min	58.0	40.0	1.70	2.00	2.00	0.05	0.10	0.50	1.0	7.36	6.40
Max	469.0	425.0	6.50	4.00	3.00	0.30	0.10	4.59	12.0	7.70	10.08
Yearly Average	172.2	152.5	2.87	3.50	2.25	0.14	0.10	1.24	2.8	7.55	7.93

Figure 4: WWTP Effluent Flow Tabulation

						IACOR	e omi						
						<u>JACOB</u>							
							WWTP	<u>-</u> 11					
				20	24 EFF	LUENT I	FLOW R	EPORTS	3				
DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	
1	839	1013	741	714	672	387	371	600	395	357	305	340	m³/d
2	790	1099	720	729	683	521	401	426	449	364	345	397	m³/d
3	745	992	848	706	700	522	433	410	400	309	347	350	m³/d
4	729	934	735	629	598	491	370	480	255	323	357	331	m³/d
5	623	901	750	766	438	522	455	464	360	342	335	365	m³/d
6	679	846	688	606	644	510	355	440	357	356	334	345	m³/d
7	704	666	662	678	616	493	395	471	350	359	333	367	m³/d
8	592	738	657	566	641	437	390	425	344	459	451	386	m³/d
9	583	760	720	607	555	729	395	416	355	345	198	403	m³/d
10	907	1043	930	553	423	192	399	400	355	237	463	419	m³/d
11	1372	1132	810	593	550	523	929	389	377	332	342	419	m³/d
12	994	832	841	735	624	541	680	389	377	344	381	440	m³/d
13	1086	841	712	1306	478	387	508	405	283	374	376	472	m³/d
14	1072	700	726	1450	628	451	508	392	326	367	355	483	m³/d
15	977	736	1225	1350	664	444	471	437	340	411	348	444	m³/d
16	844	635	1360	1003	529	429	500	276	326	377	313	404	m³/d
17	843	661	1091	964	572	292	529	395	331	359	403	777	m³/d
18	803	645	960	1041	561	428	496	378	332	309	415	985	m³/d
19	783	572	866	957	532	411	492	378	316	358	355	531	m³/d m³/d
20 21	767	573	824	1036	491	388	458	405 426	320	389	325	692 629	m³/d
22	666 610	556 556	781 765	753 816	532 543	426 513	475 450	386	338 289	304 342	368 335	604	m³/d
23	685	678	769	703	500	359	440	419	423	255	354	602	m³/d
24	628	694	715	703	639	427	550	414	348	326	391	567	m³/d
25	728	585	616	659	580	372	280	429	286	359	363	521	m³/d
26	1106	652	790	709	344	405	400	411	439	330	382	534	m³/d
27	2115	570	917	642	447	380	389	1246	295	351	349	516	m³/d
28	1697	723	1009	636	510	354	374	305	234	342	311	513	m³/d
29	1428	783	938	506	565	396	361	380	327	327	350	691	m³/d
30	1235		900	621	507	415	400	340	357	357	324	1290	m³/d
31	1119		805		581		600	366		276		1935	m³/d
TOTAL	28,749	22,116	25,871	23,758	17,347	13,145	14,254	13,498	10,284	10,640	10,608	17,752	m³/d
MIN.	583	556	616	506	344	192	280	276	234	237	198	331	m³/d
MAX.	2115	1132	1360	1450	700	729	929	1246	449	459	463	1935	m³/d
AVG.	927.39	762.62	834.55	791.93	559.58	438.17	459.81	435.42	342.80	343.23	353.60	572.65	m³/d
% Cap	105.38%	86.66%	94.84%	89.99%	63.59%	49.79%	52.25%	49.48%	38.95%	39.00%	40.18%	65.07%	
	Yearly Ave Design Cap % of Design	-	:	568.37 880 64.59%	m³/d m³/d				Yearly Tota	al:	208,	022	m <sup>3</sup>

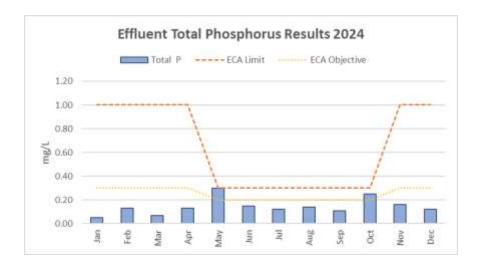
The sewage works had a total of 41 days in which the effluent flow was above the design capacity of the works but remained below the peak capacity of critical equipment. The Operating Authority and the Municipality continue to work together to identify and remediate any infiltration concerns to minimize the number of design flow exceedances caused by snow melt and heavy rain falls.

Figure 5: Effluent CBOD vs TSS Comparison to Objective/Limit



The Brussels WWTP remained well within the ECA objectives and limits for the reported year and has been deemed successful with removal efficiency.

Figure 6: Effluent TP Comparison to Objective/Limit



The Brussels WWTP was successful over all with its Phosphorus removal except for May and October where monthly ECA objectives were not met. Refer to Section G of this report for further explanation.

Figure 7: Effluent T.S.S. and T.P. Removal Efficiency

		Removal I	Efficiency		
Influent	Final	Removal	Influent	Final	Removal
S.S.	S.S.	Efficiency	Total P	Total P	Efficiency
mg/L	mg/L	%	mg/L	mg/L	%
308	3.00	99.03	2.80	0.05	98.21
67	2.00	97.01	2.00	0.13	93.50
67	2.00	97.01	1.70	0.07	95.88
40	2.00	95.00	2.30	0.13	94.35
265	3.00	98.87	3.10	0.30	90.32
80	2.00	97.50	2.57	0.15	94.16
119	2.00	98.32	2.10	0.12	94.29
78	2.00	97.44	2.50	0.14	94.40
82	2.00	97.56	2.20	0.11	95.00
94	3.00	96.81	2.76	0.25	90.94
205	2.00	99.02	3.90	0.16	95.90
425	2.00	99.53	6.50	0.12	98.15
	Min	95.00		Min	90.32
	Max	99.53		Max	98.21
	Average	97.76		Average	94.59

#### **SECTION C**

A summary of all operating issues encountered, and corrective actions taken.

The Brussels WWTP did experience several days in which the flows were above the Design Capacity but were below the Peak Capacity as outlined in the ECA due to above average snow melt, rainfalls and severe storms. Operations staff was able to avoid the need for any bypasses by manually operating and monitoring the tertiary filter. No noticeable impact had occurred to the Effluent quality during these times.

#### **SECTION D**

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.

Jacobs utilizes a computerized maintenance management system (CMMS) to track preventative and corrective maintenance activities. Preventative maintenance activities are carried out on a regular basis predetermined by the allocation and issuance of work orders including but not limited to equipment greasing, oil changes, and equipment inspections. The predetermined activities help to ensure optimal performance of the Works equipment and ensure the availability of equipment in emergency situations.

On July 3<sup>rd</sup>, 2024, CT Environmental was onsite at the Main SPS and Brussels WWTP to preform annual cleaning. The SPS had its wet well pumped and cleaned to remove debris and grease

build up to protect the structure and the equipment. At the WWTP the grit channel and inlet works was also cleaned.

In September 2024, Aqua Aerobics was onsite to start a re-coating project on the recently installed cloth media disk filters after early corrosions signs were detected. The project was halted due to the building dimensions being too small for the supplied gantry assembly. The Municipality is working at having a new gantry made to allow for the project to commence.

#### **SECTION E**

A summary of any effluent quality assurance or control measures undertaken.

The final effluent quality determines the efficiency of the treatment facility and if the standards set out in Schedule B, C, and D of the ECA are being met. The effluent quality is monitored on a regular basis by the Operating Authority for both legal and operational requirements. Proper sampling techniques and analysis are utilized to ensure that the Brussels WWTP is operating efficiently and without impact to the environment. All records of process data are kept onsite at the Brussels WWTP and electronic copies made available in the case of an emergency. The Operating Authority continues to improve upon the Standard Operating Procedures set out to ensure the integrity of the facility is maintained.

#### **SECTION F**

A summary of the calibration and maintenance carried out on all Influent, Imported Sewage and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer.

The annual flow meter calibrations were completed on July 18<sup>th</sup> and 19<sup>th</sup>, 2024, by Pierce Services and Solutions Inc. All calibration sheets are kept at the Brussels WWTP and electronic copies kept as a backup. A copy of the reporting years calibration sheets can be found in Appendix C of this report.

The pH meter and probe used at the Brussels WWTP undergoes a regular calibration and calibration verification as per manufacturer specifications. All data is recorded and kept onsite.

#### **SECTION G**

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 are required under the following situations:

iii. When any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend to deterioration of Final Effluent quality.

## iv. When the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity.

In May, the Design Objective for Total Phosphorus was not achieved. The monthly average was 0.30mg/L, while the objective is 0.20mg/L. Due to seasonal temperature changes and sewage strength changes, the single sample results for the month did not meet the objectives set. Inhouse testing for the month was well within the objective limits.

In October, the Design Objective for Total Phosphorus was not achieved. The monthly average was 0.25mg/L, while the objective is 0.20mg/L. Due to seasonal temperature changes and sewage strength changes, the single sample results for the month did not meet the objectives set. Inhouse testing for the month was well within the objective limits.

The Operating Authority has continued to implement pro-active measures to minimize the potential of these design objective exceedances with daily inspections and data interpretations.

#### **SECTION H**

A tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed.

Waste activated sludge (WAS) is stored in the onsite digest. A grab sample of the sludge is collected quarterly and analyzed for the parameters listed in Schedule D of the ECA under Sludge/Biosolids. A copy of the sludge analysis can be found in Appendix D of this report.

For the year 2025, it is anticipated that the volume of sludge and concentrations produced will remain the same as previous years with little new development occurring.

Sludge is currently hauled off site annually by Ontario Greenways Inc. OGI. For the 2024 reporting year a total volume of 726 m<sup>3</sup> was hauled off site and land applied.

#### **SECTION I**

A summary of any complaints received, and any steps taken to address the complaints.

No complaints were received regarding the Brussels WWTP for the 2024 reporting year and no sanitary backups were reported to the Municipality or Operating Authority.

#### **SECTION J**

A summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events.

There were no Bypasses or Overflows during the reporting year for the Brussels WWTP or its Sewage Works.

#### **SECTION K**

A summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Limited Operations Flexibility Condition, including a report on status of implementation of all modification.

No Notices of Modifications were completed during the reporting year.

#### **SECTION L**

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 overall Bypass / Overflow elimination including expenditures and proposed projects to eliminate Bypass / Overflows with estimated budget forecast for the year following that for which the report in submitted.

No projects were undertaken in the collections system to eliminate Bypass / Overflows.

The Municipality of Huron East and the Operating Authority work together to preform regular cleaning and inspections of the entire sanitary collections system to identify and prevent significant issues. In the reporting year, the system was flushed, and CCTV inspections occurred in range with the allowable budget set out by the Municipality.

#### **SECTION M**

Any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.

Nothing to report in the reporting year.

#### **SECTION N**

A summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

A sampling schedule is created and distributed by the start of the reporting year and adhered to by the Operating Authority in accordance with Schedule 9 page 14 and 15 of the ECA.

During the 2024 reporting year, samples were collected on the Tuesday of every week with deviations only occurring when sample delivery and holding times would be exceeded due to SGS Laboratory holidays.

### **APPENDIX A**

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

January

Brussels W.W.T.P.
Operations Number: 110002354 Operating Authority: Jacobs Municipality of Huron East

2024 YEAR:

Analyst: SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 2-Jan	5332		290	308	2.80	4.0	3.0	0.05	0.10	1.02	2	7.76	9.5
<b>2</b> 9-Jan	4780											7.49	8.4
<b>3</b> 16-Jan	4130											7.73	10.3
<b>4</b> 23-Jan	4651											7.62	8.8
<b>5</b> 30-Jan	3736											7.74	10.4
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	Number of Tests		1	1	1	1	1	1	1	1	1	5	5
Mont	thly Avera	ge mg/L	290	308	2.8	4.0	3.0	0.05	0.10	1.0	2.0	7.67	9.48
Mon	Monthly Average kg/d					3.71	2.78	0.05	0.09				

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: February

Brussels W.W.T.P. Operations Number:

110002354 Operating Authority: Jacobs Municipality of Huron East

YEAR: 2024

SGS Analyst :

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 6-Feb	4492		85	67	2.00	2.0	2.0	0.13	0.10	0.67	2	7.60	9.5
<b>2</b> 13-Feb	4420											7.60	9.5
<b>3</b> 20-Feb	4365											7.58	12.4
<b>4</b> 27-Feb	4107											7.63	8.9
5													
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	umber of T	ests	1	1	1	1	1	1	1	1	1	4	4
Mont	Monthly Average mg/L 85 67 2.0			2.0	2.0	2.0	0.13	0.10	0.67	2.0	7.60	10.08	
Mon	thly Avera	ge kg/d				1.53	1.53	0.10	0.08				

MONTH: March

Brussels W.W.T.P. 110002354 Operations Number: YEAR: 2024

Operating Authority: Jacobs Municipality of Huron East Analyst : SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	pН	D.O.
<b>1</b> 5-Mar	3303		58	67	1.70	2.0	2.0	0.07	0.10	0.67	4	7.56	8.3
<b>2</b> 12-Mar	2347											7.67	9.2
<b>3</b> 19-Mar	3340											7.72	9.4
<b>4</b> 26-Mar	4132											7.57	8.9
5													
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Limits					15	15	see below	see below		200-Geo	6.5-9.0	
Nu	Number of Tests		1	1	1	1	1	1	1	1	1	4	4
Mont	hly Avera	ge mg/L	58	67	1.7	2.0	2.0	0.07	0.10	0.67	4.0	7.63	8.95
Mon	thly Avera	ge kg/d				1.67	1.67	0.06	0.08				

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: April

Brussels W.W.T.P. 110002354 2024 YEAR:

Operations Number: 1
Operating Authority: Jacobs
Municipality of Huron East

SGS Analyst:

	ML	.ss	RAW	INFL	UENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	pН	D.O.
<b>1</b> 2-Apr	4146											7.67	8.7
<b>2</b> 9-Apr	4308		96	40	2.3	4.0	2.0	0.13	0.100	0.5	2.00	7.42	7.8
<b>3</b> 16-Apr	4049											7.79	8.8
<b>4</b> 24-Apr	4200											7.61	8.2
<b>5</b> 30-Apr	3748											7.52	8.6
EC	CA Object	ives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
N	umber of T	ests	1	1	1	1	1	1	1	1	1	5	5
Mont	thly Avera	ge mg/L	96	40	2.3	4.0	2.0	0.13	0.10	0.50	2.0	7.60	8.42
Mon	thly Avera	ge kg/d				3.17	1.58	0.10	0.08		•		

MONTH: May

Brussels W.W.T.P. 110002354 YEAR: 2024 Operations Number:

Operating Authority: Jacobs Municipality of Huron East Analyst : SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 7-May	4675		469	265	3.10	4.0	3.0	0.30	0.10	0.96	2	7.58	8.5
<b>2</b> 14-May	4768											7.76	7.9
<b>3</b> 21-May	4632											7.73	8
<b>4</b> 28-May	5086											7.72	9.7
5													
EC	A Object	ives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
E	ECA Limi	ts				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	mber of T	ests	1	1	1	1	1	1	1	1	1	5	5
Monti	hly Averag	je mg/L	469	265	3.1	4.0	3.0	0.30	0.10	0.96	2.0	7.70	8.53
Mont	Monthly Average kg/d					2.24	1.68	0.17	0.06		·		·

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: June

Brussels W.W.T.P. Operations Number: 110002354 2024 YEAR:

Operating Authority: Jacobs Municipality of Huron East Analyst: SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	pН	D.O.
<b>1</b> 4-Jun	3870		75	80	2.57	4.0	2.0	0.15	0.10	4.59	1	8.21	7.1
<b>2</b> 11-Jun	3918											7.53	7.5
<b>3</b> 18-Jun	4234											7.21	6.8
<b>4</b> 25-Jun	4344											7.56	6.8
5													
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	umber of T	ests	1	1	1	1	1	1	1	1	1	5	5
Mont	thly Avera	ge mg/L	75	80	2.6	4.0	2.0	0.15	0.10	4.59	1.0	7.63	7.05
Mon	Monthly Average kg/d					1.75	0.88	0.07	0.04				

MONTH: July

Brussels W.W.T.P.

110002354 Operations Number:

YEAR:

2024

Operating Authority: Jacobs Municipality of Huron East

Analyst :

SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	ΙΤ		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 2-Jul	3806											7.44	7.5
<b>2</b> 9-Jul	4427		124	119	2.1	4.0	2.0	0.12	0.100	1.5	1.00	7.61	7.1
<b>3</b> 16-Jul	3290											7.14	7.4
<b>4</b> 23-Jul	3504											7.14	6
<b>5</b> 30-Jul	3433											7.45	6.9
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	umber of T	ests	1	1	1	1	1	1	1	1	1	5	5
Mont	thly Avera	ge mg/L	124	119	2.1	4.0	2.0	0.12	0.10	1.45	1.0	7.36	6.98
Mon	Monthly Average kg/d					1.84	0.92	0.06	0.05				

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH:

August

Brussels W.W.T.P.

110002354 Operations Number:

YEAR:

2024

Operating Authority: Jacobs Municipality of Huron East

Analyst :

SGS

	ML	.ss	RAW	INFL	JENT				FINAL	EFFLUEN	IT		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 6-Aug	4014											7.40	7.6
<b>2</b> 13-Aug	3802		75	78	2.5	2.0	2.0	0.14	0.100	1.0	2.00	7.47	7.1
<b>3</b> 20-Aug	4207											7.43	7.3
<b>4</b> 27-Aug	4343											7.40	5.1
5													
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Number of Tests 1 1 1		1	1	1	1	1	1	5	5				
Mont	Monthly Average mg/L 75 78 2.5		2.5	2.0	2.0	0.14	0.10	0.97	2.0	7.43	6.78		
Mon	Monthly Average kg/d					0.87	0.87	0.06	0.04				

MONTH:

September

Brussels W.W.T.P.
Operations Number: '1'
Operating Authority: Jacobs
Municipality of Huron East 110002354

YEAR:

2024

Analyst : SGS

	ML	.ss	RAW	INFL	JENT		FINAL EFFLUENT							
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.	
<b>1</b> 3-Sep	3844		76	82	2.20	4.0	2.0	0.11	0.10	1.29	2	7.57	6.4	
<b>2</b> 10-Sep	4840											7.72	6.5	
<b>3</b> 17-Sep	3934											7.46	7.1	
<b>4</b> 24-Sep	4102											7.72	5.6	
5														
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0	
	ECA Limits					15	15	see below	see below		200-Geo	6.5-9.0		
N	Number of Tests 1 1 1		1	1	1	1	1	1	5	5				
Monthly Average mg/L 76 82 2.2			4.0	2.0	0.11	0.10	1.29	2.0	7.62	6.40				
Monthly Average kg/d				1.37	0.69	0.04	0.03							

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH:

October

110002354

YEAR:

2024

Brussels W.W.T.P.
Operations Number: '1'
Operating Authority: Jacobs
Municipality of Huron East

Analyst :

SGS

	ML	.ss	RAW	INFL	JENT		FINAL EFFLUENT								
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.		
<b>1</b> 1-Oct	4689		137	94	2.76	4.0	3.0	0.25	0.10	1.50	2	7.61	7.7		
<b>2</b> 8-Oct	4185											7.10	6.9		
<b>3</b> 15-Oct	5077											7.56	6.9		
<b>4</b> 22-Oct	4380											7.46	7.3		
<b>5</b> 29-Oct	4980											7.74	7.5		
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0		
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0			
N	umber of T	Tests	1	1	1	1	1	1	1	1	1	5	5		
Mont	thly Avera	Average mg/L 137 94 2.8			2.8	4.0	3.0	0.25	0.10	1.50	2.0	7.49	7.26		
Mon	thly Avera	ige kg/d				1.37	1.03	0.09	0.03						

MONTH:

November

Brussels W.W.T.P.

Operations Number: Operating Authority: Jacobs Municipality of Huron East

110002354

YEAR:

2024 SGS

Analyst:

	ML	.SS	RAW	INFL	UENT				FINAL	EFFLUEN	NT.		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	pН	D.O.
<b>1</b> 5-Nov	4220											7.52	7.4
<b>2</b> 12-Nov	3902		247	205	3.9	4.0	2.0	0.16	0.100	0.7	2.00	7.46	6.4
<b>3</b> 19-Nov	3753											7.38	6.9
<b>4</b> 26-Nov	4018											7.27	8.1
5													
EC	A Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
Nu	Number of Tests 1 1 1		1	1	1	1	1	1	5	5			
Mont	hly Avera	ge mg/L	g/L 247 205 3.9			4.0	2.0	0.16	0.10	0.70	2.0	7.41	7.20
Mon	thly Avera	ige kg/d			1.41 0.71 0.06 0.04								

#### 2024 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH:

December

110002354

YEAR:

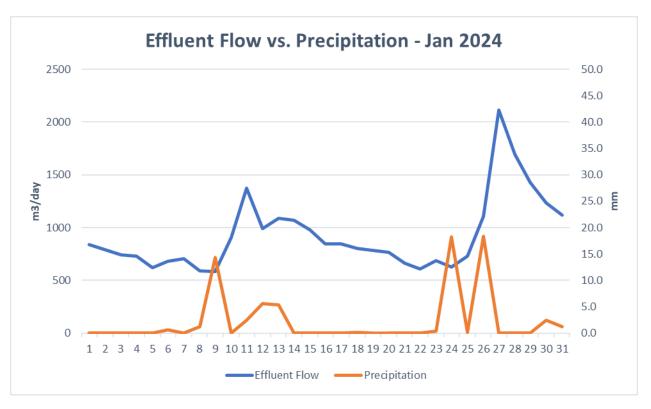
2024 SGS

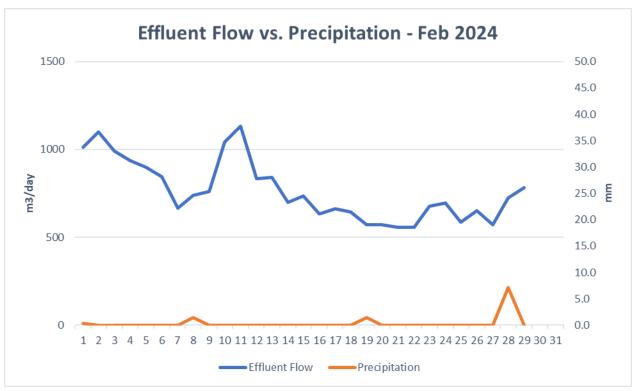
Brussels W.W.T.P.
Operations Number: "1
Operating Authority: Jacobs
Municipality of Huron East

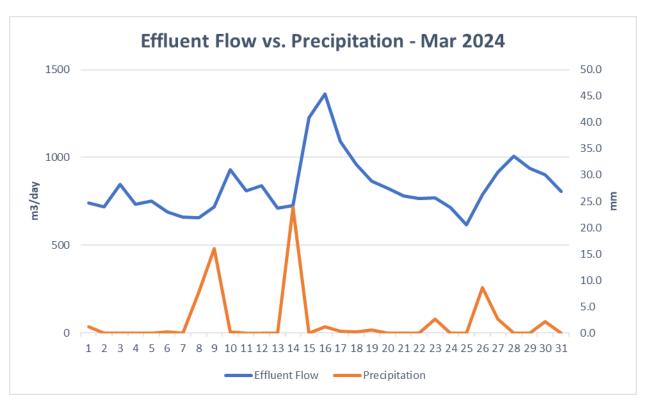
Analyst:

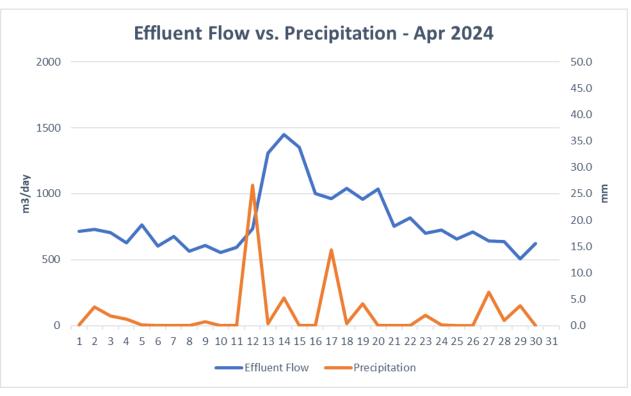
	ML	.SS	RAW	INFL	JENT				FINAL	EFFLUEN	<b>I</b> T		
Test # Date	East Aeration mg/L	West Aeratoion mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia ug/L	E-Coli Per 100 mL	рН	D.O.
<b>1</b> 3-Dec	3902		334	425	6.50	4	2	0.12	0.1	0.57	12	7.51	7.8
<b>2</b> 13-Dec	4208											7.38	7.8
<b>3</b> 17-Dec	3445											7.28	8.1
<b>4</b> 24-Dec	3976											7.48	8.4
<b>5</b> 30-Dec	2908											7.46	8.2
EC	CA Object	tives				10	10	see below	see below		100-Geo	6.5-9.0	>5.0
	ECA Lim	its				15	15	see below	see below		200-Geo	6.5-9.0	
N	Number of Tests 1 1 1		1	1	1	1	1	1	5	5			
Mon	Monthly Average mg/L		334	425	6.5	4.0	2.0	0.12	0.10	0.57	12.0	7.42	8.06
Mon	Monthly Average kg/d					2.29	1.15	0.07	0.06				

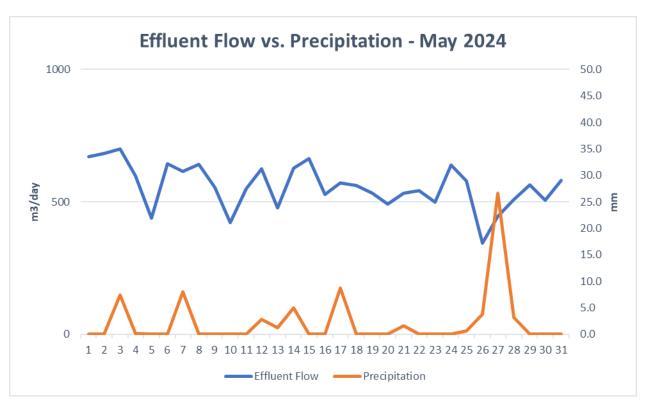
### **APPENDIX B**

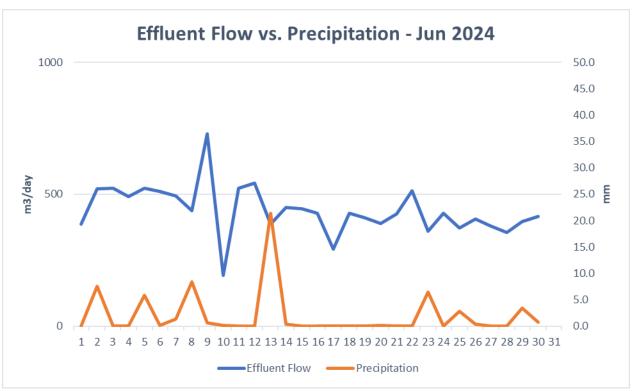


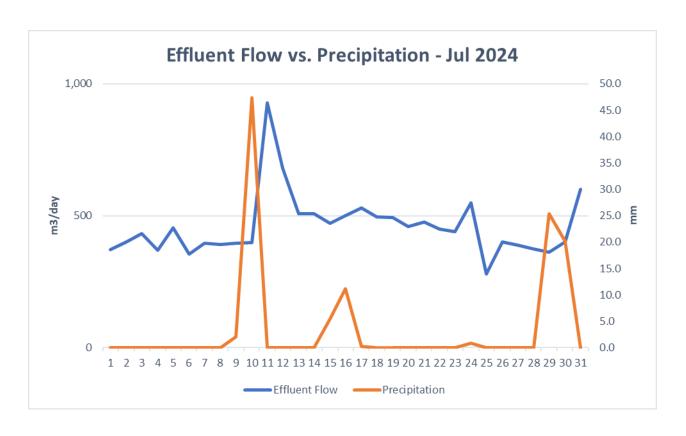


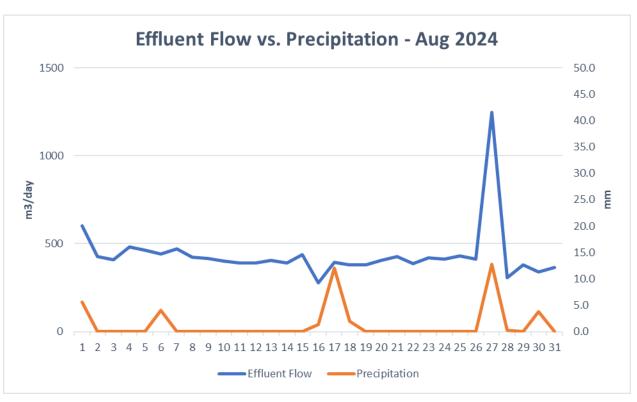


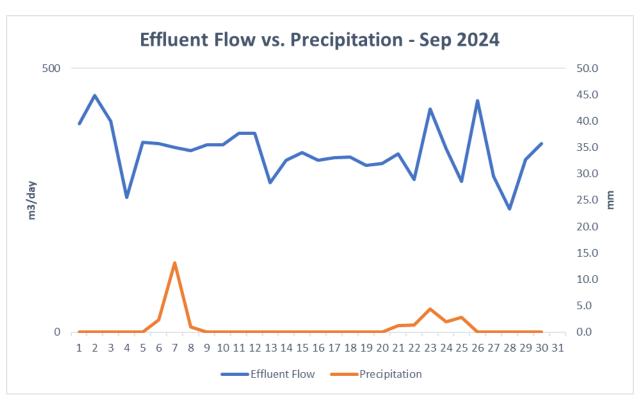


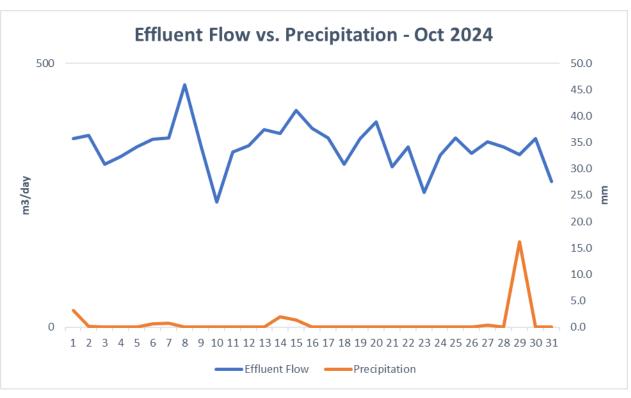


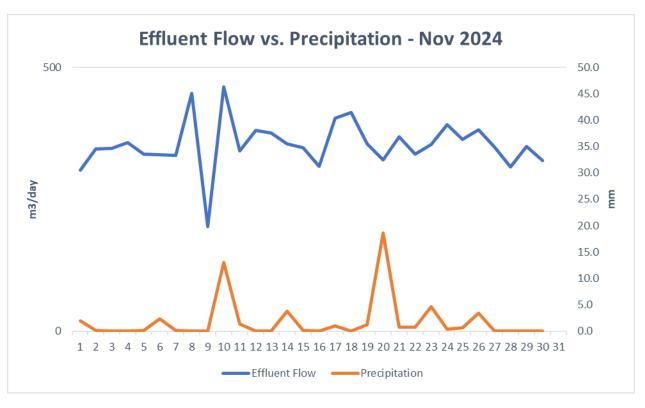


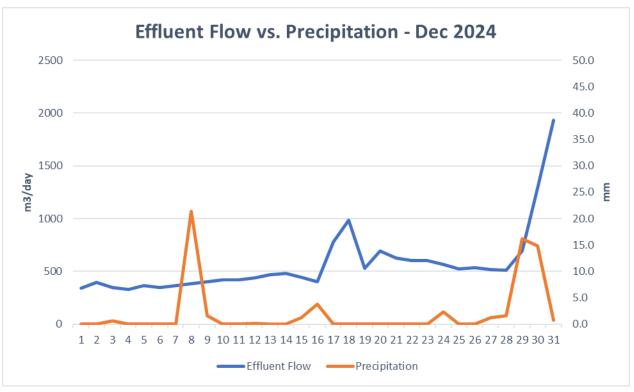












## **APPENDIX C**

	erce Servi Solutions		45 Wilton Road Guelph, ON N1E 7L6 Phone: 519.820.4853 Fax: 519.824.9402		
	Flowr	neter Repo	rt		
Verification:	x	Calibration:			
Client:	Jacobs	Location	Bri	ussels	
Description:	Mag Meter	Date:		Jul-24	-
Manufacturer;	Endress Hauser	Checked By:		Pierce	-
Model:	Pro Mag	Serial No.:		A16000	
Tag No.: FIT4	24 Range:	0-9999 m 3/d			
Input%	Theoretical	As Found	As Left		P/F
0%	0.00 m3/d	0.00 m3/d	-	m3/d	Pass
25%	13.04 l/s	1204 m3/d	-	4 m3/d	Pass
50%	73.64 l/s	2409 m3/d	100000	m3/d	Pass
75%	202.48 1/s	3613 m3/d	The state of the s	3 m3/d	Pass
100%	55 l/s	4818 m3/d	-	3 m3/d	Pass
Confirmed Run Mode: X			to service		1 433
Flowmeter Informates Flowmeter Informates Flow Unit: Meter Size: Pipe Material: Flume/Weir Type: Flume/Weir Size: Range: Comments:	FIT 03 m3/d 8 * Stainless 4 - 818 m3/d				
		Signature:	COST		· · · · · · · · · · · · · · · · · · ·

FC\_Brussels\_FIT 03\_19-Jul-24

#### **APPENDIX D**



SGS Canada Inc. P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

O.M.I. Canada Inc. (Huron East - Brussels Wastewater)

Attn: Aaron Yungblut

30 Welsh St. Seaforth, ON NOK 1W0, Canada

Phone: 519-527-1004 Fax:519-527-0090

Project: PO#145003972

17-January-2024

Date Rec.: 09 January 2024 LR Report: CA30203-JAN24

Copy:

## CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Brussels Sludge
Sample Date & Time					08-Jan-24 08:00
Temperature Upon Receipt [at London Lab °C]	1.000	10 <del>000</del>	·	355	10.0
Temperature Upon Receipt [at Lakefield Lab °C]		0.500	277	777	8.0
E. Coli [cfu/1g dried wgt]	10-Jan-24	17:15	12-Jan-24	11:07	121622 UAL
E.Coli [cfu/100mL]	10-Jan-24	17:15	12-Jan-24	11:07	360000 UAL
Total Solids [mg/L]	11-Jan-24	20:39	15-Jan-24	10:43	29800
Total Suspended Solids [mg/L]	12-Jan-24	15:16	15-Jan-24	16:01	26200
Total Kjeldahl Nitrogen [as N mg/L]	11-Jan-24	18:05	15-Jan-24	10:07	1520
Ammonia+Ammonium (N) [as N mg/L]	11-Jan-24	19:24	12-Jan-24	11:07	14.0
Nitrite (as N) [mg/L]	12-Jan-24	11:59	15-Jan-24	16:25	< 3
Nitrate (as N) [mg/L]	12-Jan-24	11:59	15-Jan-24	16:25	7
Nitrate + Nitrite (as N) [mg/L]	12-Jan-24	11:59	15-Jan-24	18:25	7
Aluminum [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	1800
Arsenic [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	< 0.1
Cadmium [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.018
Calcium [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	1100
Cobalt [mg/L]	15-Jan-24	18:06	18-Jan-24	15:45	0.04
Chromium [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.41
Copper [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	16
Mercury (mg/L)	15-Jan-24	18:06	16-Jan-24	15:45	0.020
Potassium [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	120
Molybdenum [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.16
Nickel [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.38
Phosphorus (Total) [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	830
Lead [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.4
Selenium [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	0.1
Zinc [mg/L]	15-Jan-24	18:06	16-Jan-24	15:45	16

Note: Metals and mercury were analyzed on the as-received sample.

Note: E.Coli analysis (cfu/100ml) was completed at the SGS Environmental Services - London

Laboratory. The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and

UAL - Unreliable: Sample Age Exceeds Normal Limit
Page 1 of 2

Results relate only to the sample tested. Data reported represents the sample submitted to SGS. Reproduction of this analytical report in full or in part is prohibited without prior written approval. Please refer to SGS General Conditions of Services located at https://www.sgs.ca/en/terms-and-conditions (Printed copies are available upon request.)
Test method information available upon request, "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
SGS Canada Inc. Environment-Health & Safety statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.



SGS Canada Inc. 657 Consortium Court London - Ontario - N8E 2S8

Phone: 519-672-4500 FAX: 519-672-0361

19-January-2024

Date Rec.: 16 January 2024 LR Report: CA30336-JAN24

Project: PO#145004519

Copy: #1

O.M.I. Canada Inc. (Huron East - Brussels Wastewater)

Attn: Aaron Yungblut

30 Welsh St. Seaforth, ON NOK 1W0, Canada

Phone: 519-527-1004 Fax:519-527-0090

## CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Brussels Sludge
Sample Date & Time					16-Jan-24 07:25
Temp Upon Receipt [Receipt °C]	<del></del> -	-		-	4.1
E.Coli [cfu/100mL]	17-Jan-24	16:50	19-Jan-24	12:11	610000

#### Method Descriptions

Units	Description	SGS Method Code
cfu/100mL	E.Coli (sludge) by MF (using mFC Basal-BCIG)	ME-CA-JENV/MIC-LAK-AN-006

Project Specialist-London, Environment, Health & Safety

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SGS Canada Inc.

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O.M.I. Canada Inc. (Huron East - Brussels Wastewater)

Attn: Richard Marsh

30 Welsh St. Seaforth, ON NOK 1W0, Canada

Phone: 519-527-1004 Fax:519-527-0090

Project: PO#145004519

19-April-2024

Date Rec.: 09 April 2024 LR Report: CA30227-APR24 Reference: Project Name/Number

404500CH

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## CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Brussels Sludge
Sample Date & Time					09-Apr-24 07:45
Temperature Upon Receipt [at London Lab °C]					11.4
Temperature Upon Receipt [°C]					12.0
Total Solids [mg/L]	11-Apr-24	20:44	16-Apr-24	14:06	37200
Total Suspended Solids [mg/L]	12-Apr-24	10:42	16-Apr-24	13:33	30800
Total Kjeldahl Nitrogen [as N mg/L]	11-Apr-24	13:58	15-Apr-24	11:22	1720
Ammonia+Ammonium (N) [as N mg/L]	12-Apr-24	15:06	17-Apr-24	10:34	304
Nitrite (as N) [mg/L]	15-Apr-24	09:26	18-Apr-24	15:58	< 3
Nitrate (as N) [mg/L]	15-Apr-24	09:26	18-Apr-24	15:58	< 3
Nitrate + Nitrite (as N) [mg/L]	15-Apr-24	09:26	18-Apr-24	15:58	< 3
Aluminum [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	2000
Arsenic [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.1
Cadmium [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.023
Calcium [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	1400
Cobalt [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.08
Chromium [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.56
Copper [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	23
Mercury [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.020
Potassium [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	106
Molybdenum [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.22
Nickel [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.55
Phosphorus (Total) [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	1120
Lead [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.6
Selenium [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	0.2
Zinc [mg/L]	16-Apr-24	14:08	17-Apr-24	14:53	23
E. Coli [cfu/1g dried wgt]	10-Apr-24	18:30	12-Apr-24	14:52	80645
E.Coli [cfu/100mL]	10-Apr-24	18:30	12-Apr-24	14:52	300000

Note: Metals and mercury were analyzed on the as-received sample. The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100ml.

Page 1 of 2 Page 1 of 2

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Project: PO#145004519

23-July-2024

Date Rec.: 09 July 2024 LR Report: CA30267-JUL24

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## CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Brussels Sludge
Sample Date & Time				111011011	09-Jul-24 07:45
Temperature Upon Receipt [at London Lab °C]	9 <del>112</del> 3	===			8.3
Temperature Upon Receipt [at Lakefield Lab °C]	1				11.0
E. Coli [cfu/1g dried wgt]	10-Jul-24	11:35	11-Jul-24	12:30	119863
E.Coli [cfu/100mL]	10-Jul-24	11:35	11-Jul-24	12:30	350000
Total Solids [mg/L]	11-Jul-24	20:04	15-Jul-24	10:10	29200
Total Suspended Solids [mg/L]	15-Jul-24	11:03	16-Jul-24	13:20	32600
Total Kjeldahl Nitrogen [as N mg/L]	11-Jul-24	14:44	15-Jul-24	11:37	1610
Ammonia+Ammonium (N) [as N mg/L]	11-Jul-24	19:16	12-Jul-24	11:43	406
Nitrite (as N) [mg/L]	12-Jul-24	06:57	15-Jul-24	20:15	< 3
Nitrate (as N) [mg/L]	12-Jul-24	06:57	15-Jul-24	20:15	< 3
Nitrate + Nitrite (as N) [mg/L]	12-Jul-24	06:57	15-Jul-24	20:15	< 3
Aluminum [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	1600
Arsenic [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.1
Cadmium [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.018
Calcium [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	1100
Cobalt [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.04
Chromium [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.41
Copper [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	16
Mercury [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.018
Potassium [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	98
Molybdenum [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.17
Nickel [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.42
Phosphorus (Total) [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	900
Lead [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.7
Selenium [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	0.1
Zinc [mg/L]	22-Jul-24	11:35	23-Jul-24	12:54	14

Note: Metals and mercury were analyzed on the as-received sample.

Note: E.Coli analysis (cfu/100ml) was completed at the SGS Environmental Services - London Laboratory.

The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100ml.

Page 1 of 2

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10-October-2024

Date Rec.: 01 October 2024 LR Report: CA30067-OCT24

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## CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Brussels Sludge
Sample Date & Time					01-Oct-24
Temperature Upon Receipt [at Lakefield Lab °C]	(3 <del>.707</del> 2)	377	<del>555</del> 25	1	9.0
Total Solids [mg/L]	03-Oct-24	21:18	07-Oct-24	09:32	41000
Total Suspended Solids [mg/L]	07-Oct-24	08:02	08-Oct-24	10:34	38300
Total Kjeldahl Nitrogen [as N mg/L]	07-Oct-24	13:08	10-Oct-24	09:58	2230
Ammonia+Ammonium (N) [as N mg/L]	04-Oct-24	08:14	07-Oct-24	13:29	158
Nitrite (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:06	< 3
Nitrate (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:06	< 3
Nitrate + Nitrite (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:06	< 3
Aluminum [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	2200
Arsenic [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.2
Calcium [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	1800
Cadmium [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.030
Cobalt [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.07
Chromium [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.94
Copper [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	23
Mercury [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.028
Potassium [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	89
Molybdenum [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.27
Nickel [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.69
Phosphorus (Total) [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	1200
Lead [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.8
Selenium [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	0.1
Zinc [mg/L]	04-Oct-24	16:16	07-Oct-24	11:16	24
E. Coli [cfu/1g dried wgt]	02-Oct-24	18:15	04-Oct-24	09:36	202439
E.Coli [cfu/100mL]	02-Oct-24	18:15	04-Oct-24	09:36	830000
Temperature Upon Receipt [at London Lab °C]		-	7472-	200	12.1

Note: Metals and mercury were analyzed on the as-received sample. The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and

CFU/100ml.

Note: E.Coli analysis was completed at the SGS London Laboratory.

Page 1 of 2

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