peterborough

Environmental Protection Division

Peterborough Wastewater Collections System Annual Report

FOR THE PERIOD OF

JANUARY 1, 2025, TO DECEMBER 31, 2025

Submitted To: Jacqueline Fuller, Supervisor
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Submitted By: City of Peterborough
Environmental Protection Division
Utility Services Department

Date: April 27th, 2026

Table of Contents

Section A – Operating Problems
Section B – Calibration, Maintenance and Repairs
Section C – Complaints
Section D – Alterations to the Authorized System
Section E – Overflows and Spills
Section F – Efforts to Reduce Overflows and By-passes

Appendix A – Calibration Report
Appendix B – Simcoe Street Force Main Report
Appendix C – Parkhill Road Over Flow Report

Introduction

This report is being prepared as a requirement of Schedule E, of Environmental Compliance (ECA) Number 145-W601, Issue 3. This section requires that a performance report be prepared for each calendar year and submitted to the MECP by April 30th of the calendar year following the reporting period.

This ECA governs the infrastructure within the municipal boundaries of the City of Peterborough that conveys sanitary sewage to the Peterborough Wastewater Treatment Plant. The Peterborough Wastewater Collections System consists of 362 kilometers of sewers including trunk sewers, separate sewers, partially separate sewers, and nominally separated sewers. Additionally, this ECA covers nine Pumping Stations and one Emergency Overflow Station. The nine Pumping Stations convey sewage through pressurized force mains that vary in length from 9 to 474 meters, with a total combined length of over 1.8 km.

Section A – Operating Problems

On March 30, 2025, Peterborough was one of many parts of Ontario that were hit with a significant ice storm. Damage from this storm caused widespread power outages across Ontario, including Peterborough. With the power outage, many of the pumping stations were without power and lost SCADA communications with the WWTP. Six of the nine pumping stations have stand-alone backup generators that were able to provide power during the outage. The remaining three stations have a quick connect to supply power from a portable generator. WWTP staff jockeyed two portable generators between the three stations without a standalone generator, pumping down the wet well and circulating to the next station until power was restored. Due to the loss of communications staff also had to physically circulate between the six stations with standalone generators to check fuel levels and verify that the station was operating without issue.

During the first week of April the levels in the Otonabee River were increasing due to snow melt withing the watershed. Levels in the river reached the point where staff deployed an “AquaDam” at the Burnhams Point Pumping Station and sandbags at the Ashburnham Pumping Station and the Park Street Emergency Overflow Station. This was done to both protect equipment and prevent river water from entering the pumping station wet well.

Section B – Calibration, Maintenance and Repairs

The Sewage Pumping Stations (SPS) identified as Ashburnham Road, Burnham Point, Engleburn, Monaghan Road, Parkhill East, Parkhill West, Simcoe Street, Valleyview, and the Park Street Emergency Overflow Station all have flow meters installed onsite.

Flow meter calibrations were performed by Franklin Empire in December of 2025. A copy of the calibration report can be found in Appendix A. Please note that this report covers all flowmeters at the WWTP as well as those at the SPS.

The City of Peterborough Annual Sewer Maintenance program is committed to cleaning and inspecting the entirety of the sanitary sewer infrastructure once every five years. In 2025, city staff cleaned over 102 kilometers and inspected approximately 60 km of sanitary sewer infrastructure as a part of this program. In addition to this, there are a number of sanitary mains within the collection system that have been flagged as having low flows. These mains are monitored and flushed once per month to mitigate the buildup of solids in the collection system.

In 2025, the city repaired 100 sanitary lateral services on municipal property with repairs varying from full lateral replacement to point repairs. In addition to the lateral repairs, there were 5 sanitary mains, and 1 pumping station force main that required repair. In each case, the repair was made by replacing the damaged portion of the infrastructure without altering the sewer system. In addition to these sanitary main repairs, there were 5 plugged sanitary mains that were relieved in 2025. Four of these main blockages were relieved without spillage to the environment. There was one main blockage and one force main repair that resulted in a discharge of sewage to the environment; these are discussed further in Section E.

All pumping stations are connected to the WWTP SCADA system and monitored remotely 24 hours a day, seven days a week. As a part of the routine maintenance that is performed on pumping stations the following work is undertaken:

- Weekly inspection of all stations.
- Monthly generator inspection and generator run on load test.
- Monthly emergency light and fire extinguisher checks.
- Annual cleaning of the pump station wet well and exercised all valves.
- Annual back flow preventor testing
- Annual generator load bank testing.

Section C – Complaints

The city's Public Works Division received 672 complaints related to issues with sanitary sewer lateral services. In each case, the initial step is for staff to inspect and rod the lateral service. If the initial inspection determines that the issue with the lateral is not on municipal property, it will be turned back to the property owner. Depending on how successful rodding the lateral is, the issue may be considered resolved or escalated to further work. This could be a camera inspection of the lateral or some type of repair of the lateral. In 2025, there were 146 requests for lateral mini camera inspections, 85 requests for lateral digs, and 5 requests for lateral relining.

Section D – Alterations to the Authorized System

The following is a summary of projects that resulted in alterations to the sanitary sewer system, which were completed and/or assumed by the City of Peterborough in 2025.

- 3700 Nassau Mills Road, Peterborough, ON
    - New residence on the north end of Trent's East Bank campus includes new and rerouted sewers on Nassau Mills Road.
- Brealey Drive Reconstruction
    - Lansdown Street to Sherbrooke Street - Sanitary pipe replacement and upgrades.
- 345 Armour Road
    - Proposed 50 meters of 250mm sanitary sewer extension on Armour Road at 5.73% grade.
    - Proposed 13 meters of 150mm sanitary sewer extension on Armour Road at 8.8% grade. Sewer extension proposed at part of 3445 Armour Road Site Plan Application.
- 77 Towerhill Road
    - Proposed sanitary sewer along Hilliard Street to support the reconstruction of the onsite sanitary sewer system at 77 Towerhill Road. The proposed sanitary sewer system within the Hilliard Street right of way consists of the following: Approximately 56 meters of 250mm diameter PVC sanitary sewer and 3 sanitary manholes.
- 145 Langton Street External Servicing:
    - Removal of eleven existing sanitary sewer laterals along the existing sanitary sewer, located along Langton Street. Works will include removal of existing lateral piping and capping service stubs as close as possible to the sanitary sewer main.
    - Sanitary sewer works are included on the South side of Langton from the intersection of Hilliard Street and Langton Street to 300 meters northeast of the intersection.

Section E – Overflows and Spills

On January 30th, 2025, a force main break was discovered at the Simcoe Street Pumping Station. Upon discovery, the station was shut down, and septic haulers were used to haul sewage out of the pumping station wet well until repairs were made. Nearby storm sewer infrastructure that was impacted by the break was cleaned out to minimize downstream impacts. This incident was reported to the MECP SAC and assigned incident number 1-GQEKOT. A copy of the report submitted to the MECP following this event can be found in Appendix B.

On April 23, 2025, staff responded to a report of sewage backing up out of a manhole onto the street near the intersection of Parkhill Road and Monaghan Road. Staff responded and cleared a blockage that was causing the backup, stopping the overflow. Investigation determined that two storm sewer catch basins were impacted by the overflow; these were cleaned by staff. There was no evidence that any sewage traveled beyond these catch basins. This incident was reported to the MECP SAC and assigned incident number 1-O1IYNQ. A copy of the report submitted to the MECP following this event can be found in Appendix C.

Section F – Efforts to Reduce Overflows and By-passes

The city maintains a Wastewater Collections Crew (WWC) that performs routine maintenance on the collection system. This includes work to identify Inflow and Infiltration (I&I) issues in the sewer system such as flushing, cleaning, and Closed-Circuit TV (CCTV) inspections. This work will aid in identifying and prioritizing areas of concern including sources of I & I.

In addition to this, the City of Peterborough spent 2.5 million in capital projects for flood reduction and to help prevent I & I into the municipal sewer system in 2025. This includes additional flushing, cleaning, and CCTV inspections beyond what is performed by the municipal WWC crew. The information gathered during the inspections is then prioritized for structural spot repairs, full length Cured in Place Pipe (CIPP) relining, and manhole rehabilitation, including grouting and cementitious coating. The City of Peterborough has dedicated an additional 2.5 million dollars in capital funds in 2026 to continue this work.

In 2023 GM Blue Plan Engineering was hired to do a Sanitary Services Master Plan. This study assessed all parts of the existing collection, conveyance, and treatment system as it relates to sanitary sewage. This study was completed in 2025 and will provide both recommendations and an implementation plan to meet the needs of the city based on forecasted development and growth out to 2051.

The City of Peterborough also offers a Flood Reduction Subsidy Program that provides subsidies to private property owners that are disconnecting foundation drains, roof drains and downspouts from the sanitary sewer system.

Appendix A

Calibration Report

Franklin Empire Inc,
550 Braidood Ave, Unit 4.
Peterborough ON K9J 1W1, CANADA

Tel: (705) 745-1626
Fax: (705) 745-3493

City of Peterborough WWTP

2025 Flow Calibrations

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-1

Date: 12/1/2025

SITE:	Peterborough WWTP	**SERVICE DATE:**	12/1/2025
PROCESS AREA:	Raw Sewage	**TECHNICIAN:**	M Manley
INSTR. TAG:	FIT-1	**JOB REFERENCE:**	PTBO WW 2025
MANUFACTURER:	Krohne		
MODEL:	IFC 100		
SERIAL No.:	10399831		
INSTR. RANGE:			

Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	8.09
DN (mm):	600
GK=1 GKL=2	2
GK:	8.300
Constant:	4177.44

Output	**(Signal)**	**(Process)**	
Type or EGU:	mA	l/s	ML/day
Min:	4.00	0.00	0.00
Max:	20.00	2893.52	250.00

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	3.99	-0.25%	3.99	-0.25%
0.50	A	4.99	4.98	-0.20%	4.98	-0.20%
1.00	B	5.98	5.97	-0.17%	5.97	-0.17%
2.00	C	7.96	7.94	-0.25%	7.94	-0.25%
5.00	D	13.89	13.86	-0.22%	13.86	-0.22%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments:

Coil 106.5 ohms
Coil open to ground
120989829 m3
S78 123
SBW SRW

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-2

Date: 12/1/2025

SITE:	Peterborough WWTP	**SERVICE DATE:**	12/1/2025
PROCESS AREA:	Raw	**TECHNICIAN:**	M Manley
INSTR. TAG:	FIT-2	**JOB REFERENCE:**	PTBO WW 2025
MANUFACTURER:	Krohne		
MODEL:	IFC 010		
SERIAL No.:	C07 2255		
INSTR. RANGE:			

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**	
Type:	GS 8 (X val)	**Type or EGU:**	mA	l/s	ML/day
Min:	0.00	**Min:**	4.00	0.00	0.00
Max:	9.02	**Max:**	20.00	2893.52	250.00
DN (mm):	600				
GK=1 GKL=2	2				
GK:	7.447				
Constant:	4177.44				

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**mA**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	4.00	0.00%	4.00	0.00%
0.50	A	4.89	4.88	-0.20%	4.88	-0.20%
1.00	B	5.77	5.77	0.00%	5.77	0.00%
2.00	C	7.55	7.55	0.00%	7.55	0.00%
5.00	D	12.87	12.86	-0.08%	12.86	-0.08%

Calibration Equipment

Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments: Coil 120.8 ohms
Open to ground

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-501

Date: 12/1/2025

SITE:	Peterborough WWTP
PROCESS AREA:	Sludge From Tanks
INSTR. TAG:	FIT-501
MANUFACTURER:	Krohne
MODEL:	IFC 010
SERIAL No.:	C07 2042
INSTR. RANGE:	

SERVICE DATE:	12/1/2025
TECHNICIAN:	M Manley
JOB REFERENCE:	PTBO WW 2025

Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	4.10
DN (mm):	100
GK=1 GKL=2	2
GK:	5.664
Constant:	1160.4

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/hr
Min:	4.00	0.00
Max:	20.00	100.00

Coil Ohms 122.9 Open Coil to ground

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	3.98	-0.50%	3.98	-0.50%
0.50	A	5.95	5.94	-0.17%	5.94	-0.17%
1.00	B	7.90	7.91	0.13%	7.91	0.13%
2.00	C	11.81	11.79	-0.17%	11.79	-0.17%

Calibration Equipment

Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments: Total 93176 m3

CALIBRATION REPORT

Report No.:	PTBO WW 2025 FIT-502
Date:	12/1/2025

SITE:	Peterborough WWTP	**SERVICE DATE:**	12/1/2025
PROCESS AREA:	Sludge From Primary Tanks	**TECHNICIAN:**	M Manley
INSTR. TAG:	FIT-502	**JOB REFERENCE:**	PTBO WW 2025
MANUFACTURER:	Krohne		
MODEL:	IFC 010		
SERIAL No.:	C07 2074		
INSTR. RANGE:			

Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	4.14
DN (mm):	100
GK=1 GKL=2	2
GK:	5.606
Constant:	1160.4

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/hr
Min:	4.00	0.00
Max:	20.00	100.00

Coil Ohms 123.4 Open Coil to ground

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	3.99	-0.25%	3.99	-0.25%
0.50	A	5.93	5.94	0.17%	5.94	0.17%
1.00	B	7.87	7.86	-0.13%	7.86	-0.13%
2.00	C	11.73	11.72	-0.09%	11.72	-0.09%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments: Total 184890 m3

CALIBRATION REPORT

Report No.:	PTBO WW 2025 FIT-503
Date:	12/1/2025

SITE:	Peterborough WWTP	**SERVICE DATE:**	12/1/2025
PROCESS AREA:	Sludge From Primary Tanks	**TECHNICIAN:**	M Manley
INSTR. TAG:	FIT-503	**JOB REFERENCE:**	PTBO WW 2025
MANUFACTURER:	Krohne		
MODEL:	IFC 010		
SERIAL No.:	C07 2055		
INSTR. RANGE:			

Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	4.18
DN (mm):	100
GK=1 GKL=2	2
GK:	5.558
Constant:	1160.4

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/hr
Min:	4.00	0.00
Max:	20.00	100.00

Coil Ohms 126.4 Open Coil to ground

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	3.99	-0.25%	3.99	-0.25%
0.50	A	5.92	5.91	-0.17%	5.91	-0.17%
1.00	B	7.83	7.83	0.00%	7.83	0.00%
2.00	C	11.66	11.67	0.09%	11.67	0.09%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments: Total 154884 m3

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-504

Date: 12/1/2025

SITE:	Peterborough WWTP
PROCESS AREA:	Sludge From Tanks
INSTR. TAG:	FIT-504
MANUFACTURER:	Krohne
MODEL:	IFC 010
SERIAL No.:	C07 2046
INSTR. RANGE:	

SERVICE DATE:	12/1/2025
TECHNICIAN:	M Manley
JOB REFERENCE:	PTBO WW 2025

Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	4.27
DN (mm):	100
GK=1 GKL=2	2
GK:	5.440
Constant:	1160.4

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/hr
Min:	4.00	0.00
Max:	20.00	100.00

Coil Ohms 124 Open Coil to ground

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	3.98	-0.50%	3.98	-0.50%
0.50	A	5.88	5.87	-0.17%	5.87	-0.17%
1.00	B	7.75	7.73	-0.26%	7.73	-0.26%
2.00	C	11.50	11.47	-0.26%	11.47	-0.26%

Calibration Equipment

Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments: 98588 m3

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-602

Date:

SITE:	Peterborough WWTP	**SERVICE DATE:**	12/1/2025
PROCESS AREA:	Flow to centruifuge		
INSTR. TAG:	FIT-602	**TECHNICIAN:**	M Manley
MANUFACTURER:	Krohne		
MODEL:	IFC 010	**JOB REFERENCE:**	PTBO WW 2025
SERIAL No.:	C07 2057		
INSTR. RANGE:			

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	GS 8 (X val)	**Type or EGU:**	mA	m3/hr
Min:	0.00	**Min:**	4.00	0.00
Max:	4.19	**Max:**	20.00	100.00
DN (mm):	100			
GK=1 GKL=2	2	Coil Ohms	129.8	Open Coil to ground
GK:	5.544			
Constant:	1160.4			

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0	4.00	4.00	0.00%	4.00	0.00%
0.50	A	5.91	5.93	0.34%	5.93	0.34%
1.00	B	7.82	7.81	-0.13%	7.81	-0.13%
2.00	C	11.64	11.65	0.09%	11.65	0.09%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
Model:	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 11, 2025	March 27, 2025	

Comments:

Total 647270 m³

CALIBRATION REPORT

Report No.:	PTBO WW 2025 LIT (FIT-311)
Date:	25-Mar-12

SITE:	Peterborough WWTP	**SERVICE DATE:**	2012-03-25
PROCESS AREA:	Flow To I & I Holding Tanks		
INSTR. TAG:	LIT (FIT-311)	**TECHNICIAN:**	M Manley
MANUFACTURER:	Milltronics		
MODEL:	MR 200	**JOB REFERENCE:**	PTBO WW 2025
SERIAL No.:			
INSTR. RANGE:			

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	Head meters	**Type or EGU:**	mA	m^3/hr
Min:	0.00	**Min:**	4.00	0.00
Max:	0.50	**Max:**	20.00	7022
Weir Width (m)	3			

			Before Calibration		**After Calibration**	
Input	**Calc flow**	**Calc. O/P**	**Output**	**%Error**	**Output**	**%Error**
0.0000	0.00	4.00	4.00	0.00%	4.00	0.00%
0.1000	627.84	5.43	5.35	-5.63%	5.35	-5.63%
0.2000	1775.80	8.05	7.95	-2.38%	7.95	-2.38%
0.3000	3262.35	11.43	11.32	-1.53%	11.32	-1.53%
0.4000	5022.71	15.44	15.36	-0.74%	15.36	-0.74%
0.5000	7019.45	19.99	19.99	-0.03%	19.99	-0.03%

Calibration Equipment			
Type:	Spare transducer	DMM	tape measure
Manufacturer:		Fluke	
Model:		Model 87	
Serial No.:		13440128	
Last Cal. Date:		Feb. 11, 2025	

Comments: Used Point #2 for test trasducer simulation.
As Found: Point 1 -0.62m, Point 2 0.32m, Point 3 0.00(4mA)
Local flow readings at 0.1m - 593.8, 0.2m - 1708.3, 0.3m - 3205, 0.4m - 5011, 0.5m - 7017(m3/hr)

CALIBRATION REPORT

Report No.:	PTBO WW 2025 FIT-100
Date:	25-Mar-12

SITE:	Peterborough WWTP	**SERVICE DATE:**	2012-03-25
PROCESS AREA:	Plant #1 effluent		
INSTR. TAG:	FIT-100	**TECHNICIAN:**	M Manley
MANUFACTURER:	Siemens		
MODEL:	Multiranger 200	**JOB REFERENCE:**	PTBO WW 2025
SERIAL No.:			
INSTR. RANGE:			

Input	**(Test)**		**Output**	**(Signal)**	**(Process)**
Type:	Head meters		**Type or EGU:**	mA	ML/day
Min:	0.0000		**Min:**	4.00	0.00
Max:	0.6934		**Max:**	20.00	70.00
Weir Width (in.)	24	**Parshall Flume**			
exponent	1.55				
constant	123.4656				

			Before Calibration		**After Calibration**	
Input (m)	**Calc flow (ML/day)**	**Calc. O/P (mA)**	**Output**	**%Error**	**Output**	**%Error**
0.000	0.000	0.00	4.00		4.00	
0.200	10.189	6.33	6.32	-0.16%	6.32	-0.16%
0.400	29.836	10.82	10.78	-0.37%	10.78	-0.37%
0.600	55.935	16.79	16.67	-0.71%	16.67	-0.71%

Calibration Equipment			
Type:	OCM Test Stand	DMM	Tape Measure
Manufacturer:		Fluke	
Model:	1	Model 87	
Serial No.:		13440128	
Last Cal. Date:		Feb. 11, 2025	

Comments:

Unable to stop flow, tested with spare transducer

CALIBRATION REPORT

Report No.: PTBO WW 2025 FIT-8

Date: 25-Mar-12

SITE:	Peterborough WWTP	**SERVICE DATE:**	2012-03-25
PROCESS AREA:	Plant #2 effluent		
INSTR. TAG:	FIT-8	**TECHNICIAN:**	M Manley
MANUFACTURER:	Siemens		
MODEL:	MR200 HMI	**JOB REFERENCE:**	PTBO WW 2025
SERIAL No.:	PBD-8060134		
INSTR. RANGE:			

Input	**(Test)**		**Output**	**(Signal)**	**(Process)**	
Type:	Head meters		**Type or EGU:**	MLD	ML/day	m3/d
Min:	0.0000		**Min:**	0.00	0.00	0.00
Max:	0.6934		**Max:**	70.00	70.00	70000.00
Weir Width (in.)	24	**Parshall Flume**				
exponent	1.55					
constant	123.4656					

			Before Calibration		**After Calibration**	
Input (m)	**Calc flow (ML/day)**	**Calc. O/P (mA)**	**mA**	**%Error**	**mA**	**%Error**
0.000	0.000	4.00	4.00		4.00	
0.200	10.189	6.33	6.50	2.69%	6.31	-0.32%
0.400	29.836	10.82	11.00	1.66%	10.76	-0.55%
0.600	55.935	16.79	16.68	-0.66%	16.66	-0.77%

Calibration Equipment			
Type:	OCM Test Stand	DMM	Tape Measure
Manufacturer:		Fluke	
Model:	1	Model 87	
Serial No.:		13440128	
Last Cal. Date:		Feb. 11, 2025	

Comments: Ultrasonic level sensor and transmitter are functioning correctly, but due to the flow charachteristics through this meter the flow accuracy is questionable.

Unit is set up with an offset becauce still water in flume at no flow.

Empty 47.8" adjusted to 48.2"
Span 27.2"

CALIBRATION REPORT

Report No.: PTBO WW 2025 PIT-481

Date: 25-Mar-12

SITE:	Peterborough WWTP	**SERVICE DATE:**	2012-03-25
PROCESS AREA:	Park St		
INSTR. TAG:	PIT-481	**TECHNICIAN:**	M Manley
MANUFACTURER:	Siemens		
MODEL:	Sitrans P DSIII /P410	**JOB REFERENCE:**	PTBO WW 2025
SERIAL No.:	N1E8209224705		
INSTR. RANGE:			

Input	**(Test)**		**Output**	**(Signal)**	**(Process)**
Type:	Pressure		**Type or EGU:**	mA	PSI
Min:	0.00		**Min:**	4.00	0.00
Max:	20.00	PSI	**Max:**	20.00	20.00

			Before Calibration		**After Calibration**	
Pressure	**%**	**Calc. O/P (mA)**	**Output (mA)**	**%Error**	**Output (mA)**	**%Error**
0.00	0.00%	4.00	4.00	0.00%	4.00	0.00%
5.00	25.00%	8.00	8.03	0.37%	8.03	0.37%
10.00	50.00%	12.00	12.02	0.17%	12.02	0.17%
15.00	75.00%	16.00	16.02	0.12%	16.02	0.12%
20.00	100.00%	20.00	20.02	0.10%	20.02	0.10%

Calibration Equipment			
Type:	DMM	Pressure	
Manufacturer:	Fluke	Crystal	
Model:	Model 87	300	
Serial No.:	13440128	574851	
Last Cal. Date:	Feb. 11, 2025	Nov. 18 2025	

Comments: Pressure test only

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME658
Sensor Serial No.	PBD-KO024822
Transmitter Code No.	7ME691
Transmitter Serial No.	343017N376
Location	FIT 2

Results:

Verification file name or No.		FIT 2
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	**Current Output**			**Frequency Output**		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.799mA	-0.14%	0.500kHz	0.497kHz	-0.57%
1.0m/s	5.600mA	5.598mA	-0.11%	1.000kHz	0.997kHz	-0.31%
3.0m/s	8.800mA	8.802mA	0.03%	3.000kHz	2.999kHz	-0.02%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	200.000 m³ /h
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		10166122.0 m³
Totalizer 1 value after test		10166122.0 m³
Totalizer 2 value before test		1043.02099609 m³
Totalizer 2 value after test		1043.02233887 m³
Operating time in days		6678

Sensor Details:

Size	DN 150 6 IN
Cal. Factor	17.47212219
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.01 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	009202N449
Transmitter Code No.	7ME691
Transmitter Serial No.	891521N419
Location	FIT 3

Results:

Verification file name or No.		FIT 3
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.805mA	0.61%	0.500kHz	0.501kHz	0.11%
1.0m/s	5.600mA	5.605mA	0.31%	1.000kHz	1.001kHz	0.08%
3.0m/s	8.800mA	8.805mA	0.10%	3.000kHz	3.002kHz	0.06%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	100.000 m³ /h
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		6140075.0 m³
Totalizer 1 value after test		6140075.0 m³
Totalizer 2 value before test		4787.859375 m³
Totalizer 2 value after test		4787.86474609 m³
Operating time in days		5072

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.7210536
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.01 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	390002N519
Transmitter Code No.	7ME691
Transmitter Serial No.	482721N359
Location	FIT 610

Results:

Verification file name or No.		FIT 610
Transmitter		Failed
Sensor	Insulation	Not Tested
	Magnetic Circuit	Not Tested

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.810mA	1.28%	0.500kHz	0.503kHz	0.59%
1.0m/s	5.600mA	5.617mA	1.08%	1.000kHz	1.008kHz	0.78%
3.0m/s	8.800mA	8.794mA	-0.12%	3.000kHz	2.994kHz	-0.19%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	250.000 m³ /h
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		1586666.375 m³
Totalizer 1 value after test		1586666.375 m³
Totalizer 2 value before test		1815.81030273 m³
Totalizer 2 value after test		1815.81030273 m³
Operating time in days		5189

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	6.05569458
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

Passed Part Test Insulation and Magnetism separately

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.01 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	063602H201
Converter Code No.	7ME691
Converter Serial No.	302930N191
Location	P1 TK 1&2 WAS

Results:

Verification file name or No.		FIT 133
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	**Current Output**			**Frequency Output**		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.46%	0.500kHz	0.500kHz	0.08%
1.0m/s	5.600mA	5.606mA	0.40%	1.000kHz	1.002kHz	0.22%
3.0m/s	8.800mA	8.809mA	0.19%	3.000kHz	3.005kHz	0.15%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	128.019996 m³ /h
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	OFF

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	100.0 l/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	1402221.75 m³
Totalizer 1 value after test	1402221.75 m³
Totalizer 2 value before test	7985.75634766 m³
Totalizer 2 value after test	7985.75634766 m³

Sensor Details:

Size	DN 150 6 IN
Cal. Factor	15.20090675
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.03 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	063502H201
Converter Code No.	7ME691
Converter Serial No.	409630N201
Location	Plant 1 TK1 RAS

Results:

Verification file name or No.		P1 Tk1 RAS
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.805mA	0.61%	0.500kHz	0.502kHz	0.39%
1.0m/s	5.600mA	5.600mA	0.01%	1.000kHz	0.999kHz	-0.06%
3.0m/s	8.800mA	8.804mA	0.08%	3.000kHz	3.003kHz	0.11%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	749.999988 m³ /h
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	OFF

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	1.0 m³/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	58168568.0 m³
Totalizer 1 value after test	58168568.0 m³
Totalizer 2 value before test	7580.35400391 m³
Totalizer 2 value after test	7580.36035156 m³

Sensor Details:

Size	DN 250 10 IN
Cal. Factor	47.15306091
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.03 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	417302H191
Converter Code No.	7ME691
Converter Serial No.	408430N201
Location	Plant2 TK3 RAS

Results:

Verification file name or No.		P2 Tk3RAS
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.803mA	0.41%	0.500kHz	0.500kHz	0.05%
1.0m/s	5.600mA	5.608mA	0.49%	1.000kHz	1.004kHz	0.35%
3.0m/s	8.800mA	8.799mA	-0.03%	3.000kHz	3.000kHz	0.01%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	789.000012 m³ /h
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	1.0 m³/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	25785.456 Ml
Totalizer 1 value after test	25785.456 Ml
Totalizer 2 value before test	0.82155048 Ml
Totalizer 2 value after test	0.82155591 Ml

Sensor Details:

Size	DN 250 10 IN
Cal. Factor	45.11209488
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.03 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	063402H201
Converter Code No.	7ME691
Converter Serial No.	410330N201
Location	Plant 2 Tank 4 RAS

Results:

Verification file name or No.		P2 Tk4 RAS
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.802mA	0.30%	0.500kHz	0.501kHz	0.10%
1.0m/s	5.600mA	5.600mA	0.01%	1.000kHz	0.999kHz	-0.06%
3.0m/s	8.800mA	8.802mA	0.04%	3.000kHz	3.002kHz	0.08%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	789.000012 m³ /h
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	1.0 m³/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	22219.25 Ml
Totalizer 1 value after test	22219.252 Ml
Totalizer 2 value before test	1.42579712 Ml
Totalizer 2 value after test	1.42579712 Ml

Sensor Details:

Size	DN 250 10 IN
Cal. Factor	46.95221329
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.03 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME658
Sensor Serial No.	614503U086
Transmitter Code No.	7ME69101AA101BA0
Transmitter Serial No.	IXH11120573
Location	Septage

Results:

Verification file name or No.		Septage
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.801mA	0.17%	0.500kHz	0.499kHz	-0.18%
1.0m/s	5.600mA	5.603mA	0.16%	1.000kHz	1.000kHz	0.02%
3.0m/s	8.800mA	8.803mA	0.07%	3.000kHz	3.002kHz	0.07%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	70.0000 l/s
	Flow Direction	Positive
	Low flow Cut-off	2.50%
	Empty Pipe	ON
Output	Current Output	OFF
	Time Constant	N/A
	Relay Output	Error Level
	Digital Output	Pulse
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.01 m³/p
	Pulse width	0.033 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		91410289.0625 l
Totalizer 1 value after test		91410312.5 l
Totalizer 2 value before test		277044562.5 l
Totalizer 2 value after test		277044562.5 l
Operating time in days		3392

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	8.87677097
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.01 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	468102H422
Transmitter Code No.	7ME692
Transmitter Serial No.	N1C9219845
Location	Ashburnham

Results:

Verification file name or No.		Ashburnham
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	**Current Output**			**Frequency Output**		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.46%	0.500kHz	0.501kHz	0.16%
1.0m/s	5.600mA	5.600mA	0.02%	1.000kHz	0.999kHz	-0.11%
3.0m/s	8.800mA	8.805mA	0.10%	3.000kHz	3.003kHz	0.10%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	800.000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		32626142.0 m³
Totalizer 1 value after test		32626142.0 m³
Totalizer 2 value before test		2792.19628906 m³
Totalizer 2 value after test		2792.19628906 m³
Operating time in days		4739

Sensor Details:

Size	DN 400 16 IN
Cal. Factor	128.40750122
Correction Factor	1.0
Excitation Freq.	1.875Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

Endress+Hauser
People for Process Automation

Verification report flowmeter

Plant operator	City of Peterborough
Device information	
Location Burnham Meadows	**Device tag** FIT-1
Module name Promag L	**Nominal diameter** DN100 / 4"
Device name Promag 400	**Order code** 5L4C1H-2WL3/101
Serial number K7146919000	**Firmware version** 01.05.05
Calibration	
Calibration factor 1.2747	**Zero point** 1

Verification information	
Operating time 3486d12h59m39s	**Date/time** 02.12.25 16:10
Verification ID 9	
Verification results	
Overall result	☑ **Passed**
Detailed results	See next page

Overall result: Result of the complete device functionality test via Heartbeat Technology

Notes

Validity of the verification report is only given:
For devices with the Heartbeat Verification enabled software option
For verifications, carried out by the Endress+Hauser Service, or an authorized Endress+Hauser service provider

Date	Inspectors signature	Operator's signature

Endress+Hauser
People for Process Automation

Verification report flowmeter

Serial number: K7146919000
Verification detailed results Verification ID 9

Sensor	☑	**Passed**
Coil current shot time	☑	Passed
Coil hold voltage	☑	Passed
Coil current	☑	Passed
Sensor electronic module	☑	**Passed**
Reference voltage	☑	Passed
Linearity of electrode measuring circuit	☑	Passed
Offset of electrode measuring circuit	☑	Passed
I/O module	☑	**Passed**

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-S4184502
Transmitter Code No.	7ME691
Transmitter Serial No.	N1RO190033
Location	Burnham P2

Results:

Verification file name or No.		Pump 2
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.803mA	0.36%	0.500kHz	0.500kHz	0.09%
1.0m/s	5.600mA	5.602mA	0.14%	1.000kHz	1.000kHz	0.01%
3.0m/s	8.800mA	8.804mA	0.08%	3.000kHz	3.002kHz	0.06%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	100.000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		13046.66699219 m³
Totalizer 1 value after test		13046.703125 m³
Totalizer 2 value before test		6.62743139 m³
Totalizer 2 value after test		6.62743664 m³
Operating time in days		402

Sensor Details:

Size	DN 200 8 IN
Cal. Factor	22.93662834
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-S4184501
Transmitter Code No.	7ME691
Transmitter Serial No.	N1RO190084
Location	Burnham P1

Results:

Verification file name or No.		Pump 1
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.805mA	0.59%	0.500kHz	0.500kHz	0.01%
1.0m/s	5.600mA	5.606mA	0.40%	1.000kHz	1.001kHz	0.09%
3.0m/s	8.800mA	8.809mA	0.20%	3.000kHz	3.003kHz	0.09%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	100.000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	Pulse
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.99999953 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		13007.11621094 m³
Totalizer 1 value after test		13007.15429688 m³
Totalizer 2 value before test		198.38528442 m³
Totalizer 2 value after test		198.38528442 m³
Operating time in days		402

Sensor Details:

Size	DN 200 8 IN
Cal. Factor	23.85321999
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R6274508
Transmitter Code No.	7ME691
Transmitter Serial No.	N1R5160090
Location	Engleburn P1

Results:

Verification file name or No.		Pump #1
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.802mA	0.31%	0.500kHz	0.500kHz	-0.05%
1.0m/s	5.600mA	5.602mA	0.14%	1.000kHz	1.000kHz	-0.01%
3.0m/s	8.800mA	8.804mA	0.08%	3.000kHz	3.001kHz	0.03%

Current Output 4-20mA Frequency Output 0-10kHz

Transmitter Settings:

Basic	Qmax.	799.99: l /min
	Flow Direction	Negative
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	Pulse
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.99999953 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		11162.63964844 m³
Totalizer 1 value after test		11162.65332031 m³
Totalizer 2 value before test		3119.35131836 m³
Totalizer 2 value after test		3119.35668945 m³
Operating time in days		709

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.92143869
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R6274507
Transmitter Code No.	7ME691
Transmitter Serial No.	N1R5160089
Location	Engleburn P2

Results:

Verification file name or No.		Pump #2
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.46%	0.500kHz	0.501kHz	0.16%
1.0m/s	5.600mA	5.603mA	0.20%	1.000kHz	1.001kHz	0.06%
3.0m/s	8.800mA	8.804mA	0.09%	3.000kHz	3.002kHz	0.06%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	799.99: l /min
	Flow Direction	Negative
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	Pulse
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.99999953 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		11178.16113281 m³
Totalizer 1 value after test		11178.17578125 m³
Totalizer 2 value before test		3107.83764648 m³
Totalizer 2 value after test		3107.84326172 m³
Operating time in days		709

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.88624859
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R9064520
Converter Code No.	7ME691
Converter Serial No.	N1P7080150
Location	Monaghan SPS P1

Results:

Verification file name or No.		Monaghan P1
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.47%	0.500kHz	0.501kHz	0.14%
1.0m/s	5.600mA	5.604mA	0.23%	1.000kHz	1.001kHz	0.07%
3.0m/s	8.800mA	8.806mA	0.13%	3.000kHz	3.003kHz	0.10%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	100.0 l/s
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	OFF
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	0.0 US G/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	107136.71875 m³
Totalizer 1 value after test	107136.75 m³
Totalizer 2 value before test	24.01495934 m³
Totalizer 2 value after test	24.01496696 m³

Sensor Details:

Size	DN 150 6 IN
Cal. Factor	14.5755043
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R9064519
Converter Code No.	7ME691
Converter Serial No.	N1P7080152
Location	Monaghan P2

Results:

Verification file name or No.		Monaghan P2
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.46%	0.500kHz	0.501kHz	0.16%
1.0m/s	5.600mA	5.603mA	0.22%	1.000kHz	1.001kHz	0.07%
3.0m/s	8.800mA	8.806mA	0.13%	3.000kHz	3.003kHz	0.10%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Converter Settings:

Basic

Qmax.	100.0 l/s
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	OFF
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	0.0 US G/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	106570.2421875 m³
Totalizer 1 value after test	106570.265625 m³
Totalizer 2 value before test	9.6826086 m³
Totalizer 2 value after test	9.6826334 m³

Sensor Details:

Size	DN 150 6 IN
Cal. Factor	15.31464577
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

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Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R6274509
Converter Code No.	7ME691
Converter Serial No.	N1R5160044
Location	Parkhill East #1

Results:

Verification file name or No.		Parkhill_E P1
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	**Current Output**			**Frequency Output**		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.803mA	0.37%	0.500kHz	0.501kHz	0.17%
1.0m/s	5.600mA	5.604mA	0.28%	1.000kHz	1.002kHz	0.18%
3.0m/s	8.800mA	8.809mA	0.18%	3.000kHz	3.005kHz	0.15%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	2000.0004 l /m
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	OFF

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	0.99999953 US G/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	6915.39941406 m³
Totalizer 1 value after test	6915.41992188 m³
Totalizer 2 value before test	5.42959595 m³
Totalizer 2 value after test	5.42960072 m³

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.96543884
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-R6274506
Converter Code No.	7ME691
Converter Serial No.	N1R5160029
Location	Parkhill E P2

Results:

Verification file name or No.		Parkhill E P2
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.805mA	0.58%	0.500kHz	0.500kHz	0.09%
1.0m/s	5.600mA	5.603mA	0.19%	1.000kHz	1.000kHz	-0.03%
3.0m/s	8.800mA	8.806mA	0.12%	3.000kHz	3.002kHz	0.07%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	2000.0004 l /m
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	OFF

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	0.99999953 US G/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	7200.43066406 m³
Totalizer 1 value after test	7200.45019531 m³
Totalizer 2 value before test	2.77330089 m³
Totalizer 2 value after test	2.77330542 m³

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.93802786
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	063102H312
Transmitter Code No.	7ME69201AA101AB0
Transmitter Serial No.	N1E6250009
Location	Parkhill W

Results:

Verification file name or No.		Parkhill W
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.802mA	0.30%	0.500kHz	0.500kHz	0.01%
1.0m/s	5.600mA	5.604mA	0.24%	1.000kHz	1.001kHz	0.14%
3.0m/s	8.800mA	8.801mA	0.02%	3.000kHz	3.001kHz	0.02%

Current Output 4-20mA

Frequency Output 0-10kHz

Transmitter Settings:

Basic	Qmax.	445.000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	OFF
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		3530670.75 m³
Totalizer 1 value after test		3530670.75 m³
Totalizer 2 value before test		2178.00878906 m³
Totalizer 2 value after test		2178.00878906 m³
Operating time in days		4063

Sensor Details:

Size	DN 250 10 IN
Cal. Factor	43.37620163
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

Flowmeter Verification Certificate Transmitter

City of Peterborough	WWTP
Customer	Plant
FIT-620	FIT-620
Order code	Tag Name
PROMAG 50 W DN100	1.2485 - 1.2485
Device type	K-Factor
4C00BE16000	1
Serial number	Zero point
V1.04.00	V1.02.01
Software Version Transmitter	Software Version I/O-Module
12/01/2025	10:20
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Test Sensor	Passed	

FieldCheck Details	Simubox Details
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2025	03/2025
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-620**	Tag Name	**FIT-620**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2485 - 1.2485**
Serial number	**4C00BE16000**	Zero point	**1**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**10:20**

Verification Flow end value (100 %): 113.097 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	5.655 m3/h (5%)	1.50 %	-0.38 %
✓		11.310 m3/h (10.0%)	1.00 %	-0.43 %
✓		56.549 m3/h (50.0%)	0.60 %	0.13 %
✓		113.098 m3/h (100%)	0.55 %	0.10 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.001 mA
✓		4.800 mA (5%)	0.05 mA	-0.001 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.013 mA
✓		12.000 mA (50.0%)	0.05 mA	0.005 mA
✓		20.000 mA (100%)	0.05 mA	0.011 mA
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.318 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	3.256 mV

Legend of symbols

✓	✗	–	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**City of Peterborough**		Plant	**WWTP**
Order code	**FIT-620**		Tag Name	**FIT-620**
Device type	**PROMAG 50 W DN100**		K-Factor	**1.2485 - 1.2485**
Serial number	**4C00BE16000**		Zero point	**1**
Software Version Transmitter	**V1.04.00**		Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**		Verification time	**10:20**

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 m3/h	250.01 m3/h		

Actual System Ident. 115.0

Flowmeter Verification Certificate Transmitter

City of Peterborough	WWTP
Customer	Plant
FIT-601	--------
Order code	Tag Name
PROMAG 50 W DN100	1.2667 - 1.2667
Device type	K-Factor
4C00BB16000	0
Serial number	Zero point
V1.04.00	V1.02.01
Software Version Transmitter	Software Version I/O-Module
12/01/2025	10:36
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Test Sensor	Passed	

FieldCheck Details	**Simubox Details**
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2025	03/2025
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-601**	Tag Name	**--------**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2667 - 1.2667**
Serial number	**4C00BB16000**	Zero point	**0**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**10:36**

Verification Flow end value (100 %): 113.097 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	5.655 m3/h (5%)	1.50 %	-0.42 %
✓		11.310 m3/h (10.0%)	1.00 %	-0.38 %
✓		56.549 m3/h (50.0%)	0.60 %	0.17 %
✓		113.098 m3/h (100%)	0.55 %	0.13 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.000 mA
✓		4.800 mA (5%)	0.05 mA	-0.000 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.012 mA
✓		12.000 mA (50.0%)	0.05 mA	0.005 mA
✓		20.000 mA (100%)	0.05 mA	0.009 mA
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.195 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	3.261 mV

Legend of symbols

✓	✗	−	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-601**	Tag Name	**--------**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2667 - 1.2667**
Serial number	**4C00BB16000**	Zero point	**0**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**10:36**

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 m3/h	250.01 m3/h		

Actual System Ident. 119.0

Flowmeter Verification Certificate Transmitter

City of Peterborough	WWTP
Customer	Plant
FIT-630	FE630
Order code	Tag Name
PROMAG 50 W DN100	1.2611 - 1.2611
Device type	K-Factor
4C00BD16000	1
Serial number	Zero point
V1.04.00	V1.02.01
Software Version Transmitter	Software Version I/O-Module
12/01/2025	11:10
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Test Sensor	Passed	

FieldCheck Details	**Simubox Details**
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2025	03/2025
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-630**	Tag Name	**FE630**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2611 - 1.2611**
Serial number	**4C00BD16000**	Zero point	**1**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**11:10**

Verification Flow end value (100 %): 113.097 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	5.655 m3/h (5%)	1.50 %	-0.55 %
✓		11.310 m3/h (10.0%)	1.00 %	-0.48 %
✓		56.549 m3/h (50.0%)	0.60 %	0.07 %
✓		113.098 m3/h (100%)	0.55 %	0.07 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.001 mA
✓		4.800 mA (5%)	0.05 mA	-0.000 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.016 mA
✓		12.000 mA (50.0%)	0.05 mA	0.000 mA
✓		20.000 mA (100%)	0.05 mA	-0.003 mA
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.303 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	0.000 mV

Legend of symbols

✓	✗	–	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-630**	Tag Name	**FE630**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2611 - 1.2611**
Serial number	**4C00BD16000**	Zero point	**1**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**11:10**

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 m3/h	250.01 m3/h		

Actual System Ident. 125.0

Flowmeter Verification Certificate Transmitter

City of Peterborough	WWTP
Customer	Plant
FIT-640	FIT-640
Order code	Tag Name
PROMAG 50 W DN100	1.2675 - 1.2675
Device type	K-Factor
4C00BC16000	0
Serial number	Zero point
V1.04.00	V1.02.01
Software Version Transmitter	Software Version I/O-Module
12/01/2025	11:30
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Test Sensor	Passed	

FieldCheck Details	**Simubox Details**
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2025	03/2025
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-640**	Tag Name	**FIT-640**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2675 - 1.2675**
Serial number	**4C00BC16000**	Zero point	**0**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**11:30**

Verification Flow end value (100 %): 113.097 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	5.655 m3/h (5%)	1.50 %	-0.41 %
✓		11.310 m3/h (10.0%)	1.00 %	-0.42 %
✓		56.549 m3/h (50.0%)	0.60 %	0.18 %
✓		113.098 m3/h (100%)	0.55 %	0.18 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.000 mA
✓		4.800 mA (5%)	0.05 mA	-0.000 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.016 mA
✓		12.000 mA (50.0%)	0.05 mA	0.004 mA
✓		20.000 mA (100%)	0.05 mA	0.002 mA
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.318 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	3.276 mV

Legend of symbols

✓	✗	–	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**City of Peterborough**	Plant	**WWTP**
Order code	**FIT-640**	Tag Name	**FIT-640**
Device type	**PROMAG 50 W DN100**	K-Factor	**1.2675 - 1.2675**
Serial number	**4C00BC16000**	Zero point	**0**
Software Version Transmitter	**V1.04.00**	Software Version I/O-Module	**V1.02.01**
Verification date	**12/01/2025**	Verification time	**11:30**

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 m3/h	250.01 m3/h		

Actual System Ident. 125.0

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME65804PJ142
Sensor Serial No.	PBD-K7104810
Converter Code No.	7ME691
Converter Serial No.	N1K3090085
Location	Simcoe East Pump

Results:

Verification file name or No.		Simcoe E
Converter		Passed
Sensor	Insulation	Failed
	Magnetic Circuit	Not Tested

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.808mA	1.01%	0.500kHz	0.500kHz	0.07%
1.0m/s	5.600mA	5.610mA	0.66%	1.000kHz	1.002kHz	0.18%
3.0m/s	8.800mA	8.809mA	0.19%	3.000kHz	3.001kHz	0.05%

Current Output 4-20mA

Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	100.0 l/s
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	1.0 m³/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	463726.40625 m³
Totalizer 1 value after test	463726.46875 m³
Totalizer 2 value before test	703.30108643 m³
Totalizer 2 value after test	703.30114746 m³

Sensor Details:

Size	DN 200 8 IN
Cal. Factor	31.98593521
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME65804PJ142
Sensor Serial No.	PBD-K7104809
Converter Code No.	7ME691
Converter Serial No.	N1K3090085
Location	Simcoe SPS West Pump

Results:

Verification file name or No.		Simcoe W
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.808mA	1.06%	0.500kHz	0.500kHz	0.05%
1.0m/s	5.600mA	5.610mA	0.64%	1.000kHz	1.001kHz	0.15%
3.0m/s	8.800mA	8.809mA	0.20%	3.000kHz	3.001kHz	0.03%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	100.0 l/s
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	Pulse
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	1.0 m³/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	463726.6875 m³
Totalizer 1 value after test	463726.75 m³
Totalizer 2 value before test	703.30114746 m³
Totalizer 2 value after test	703.30114746 m³

Sensor Details:

Size	DN 200 8 IN
Cal. Factor	32.09616852
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME658
Sensor Serial No.	PBD-N6224507
Converter Code No.	7ME69102CA101AA0
Converter Serial No.	N1N5310016
Location	Townsend SPS

Results:

Verification file name or No.		Townsend
Converter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	**Current Output**			**Frequency Output**		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.803mA	0.39%	0.500kHz	0.500kHz	0.06%
1.0m/s	5.600mA	5.602mA	0.12%	1.000kHz	1.000kHz	-0.04%
3.0m/s	8.800mA	8.803mA	0.07%	3.000kHz	3.001kHz	0.03%

Current Output 4-20mA Frequency Output 0-10kHz

Converter Settings:

Basic

Qmax.	50.0 l/s
Flow Direction	Positive
Low flow Cut-off	1.50%
Empty Pipe	ON

Output

Current Output	ON (4-20mA)
Time Constant	5.0 Sec.
Relay Output	Error Level
Digital Output	OFF
Frequency Range	N/A
Time Constant	N/A
Volume/pulse	0.0 US G/p
Pulse width	0.066 sec.
Pulse polarity	Positiv

Totalizer 1 value before test	23814.36328125 m³
Totalizer 1 value after test	23814.38476563 m³
Totalizer 2 value before test	179.86308289 m³
Totalizer 2 value after test	179.86308289 m³

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	7.45990801
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5060)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	4.02
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-S4184503
Transmitter Code No.	7ME691
Transmitter Serial No.	N1RO190060
Location	Valleyview Pump 1

Results:

Verification file name or No.		Valleyview P1
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.804mA	0.46%	0.500kHz	0.500kHz	0.04%
1.0m/s	5.600mA	5.605mA	0.30%	1.000kHz	1.001kHz	0.09%
3.0m/s	8.800mA	8.807mA	0.15%	3.000kHz	3.002kHz	0.07%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	70.0000 l/s
	Flow Direction	Negative
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		11094.2578125 m³
Totalizer 1 value after test		11094.27246094 m³
Totalizer 2 value before test		29.2314415 m³
Totalizer 2 value after test		29.23685265 m³
Operating time in days		455

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.90980577
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	City of Peterborough
Address	WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME652
Sensor Serial No.	PBD-S4184504
Transmitter Code No.	7ME691
Transmitter Serial No.	N1RO190061
Location	Valleyview P2

Results:

Verification file name or No.		Valleyview P2
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.803mA	0.44%	0.500kHz	0.501kHz	0.22%
1.0m/s	5.600mA	5.603mA	0.21%	1.000kHz	1.001kHz	0.13%
3.0m/s	8.800mA	8.805mA	0.10%	3.000kHz	3.003kHz	0.10%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	70.0000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	Pulse
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.99999953 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		13150.14941406 m³
Totalizer 1 value after test		13150.16894531 m³
Totalizer 2 value before test		25.36640358 m³
Totalizer 2 value after test		25.36945152 m³
Operating time in days		456

Sensor Details:

Size	DN 100 4 IN
Cal. Factor	5.93649149
Correction Factor	1.0
Excitation Freq.	7.5Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2025.10.14
ReCal. date	2026.10.14

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2025.12.02 M Manley

Appendix B

Simcoe Street Force Main Break Report

City of Peterborough
500 George Street North Peterborough, ON
K9H 3R9
peterborough.ca | 1-855-738-3755

Kent Keeling
Manager, Environmental Protection Services
Environmental Services
Phone: 705-742-7777, ext. 2629
Email: kkeeling@peterborough.ca

February 10, 2025

Ministry of the Environment – Peterborough District Office
Robinson Place
300 Water Street, 2nd Floor, South Tower
Peterborough, ON K9J 8M5

Re: Simcoe Pumping Station Incident # 1-GQEKOT
Force Main Break/Pumping Station Overflow

This report is being submitted as required in the following Environmental Compliance Approvals:

1. Sections 5.b. of ECA No.: 0001107542 Ver. 1.2
2. Schedule E, Section 4.3.1. (c) of ECA No.: 145-W601.

At 01:30 on January 30, 2025, staff of the City of Peterborough Environmental Services Division were alerted to a probable force main break at the Simcoe Pumping Station at 73 Simcoe Street and by 1:45 it was confirmed that there was a force main break.

Staff were dispatched and two vacuum trucks arrived onsite between 02:50 and 03:10. These trucks began to vacuum out impacted storm sewers and haul sewage out of the station wet well. The pumping station was taken out of service to prevent further discharge to the environment.

Locates were completed at approximately 05:30 at which time excavations began. At 07:30 a septic hauler was brought in to relieve the city vacuum trucks and haul out of the pump station wet well. The repairs were completed, tested and the pumping station put back in service by 12:20.

Two samples were collected during this event, one from the wet well, representing the sewage that discharged from the force main and entered the storm sewer and one from the storm sewer outfall at the Otonabee River. The wet well sample appeared turbid and grey,

as would be expected of raw sewage. The storm outlet sample was clear, colourless and bore no visual evidence of being impacted by sewage. Both samples were run for E. coli, Total Suspended Solids (TSS), Total Kjeldahl Nitrogen (TKN), Total Phosphorous (TP) and Biochemical Oxygen Demand (BOD_5). A summary of the analytical results can be found in Table 1.

Based on the number of pumping cycles at the station it is estimated that $20m^3$ of wastewater was pumped from the wet well into the force main from the time that the fault was discovered until the station was taken out of service. Due to the nature of the break, it is estimated that no more than 1% of this volume discharged to the road surface and storm sewer system while the remainder this volume remained in the collection system.

With the exception of TSS the Storm Outfall results were 2 to 3 orders of magnitude lower than the Wet Well sample. That said the results do indicate that the outfall sample was impacted by sewage, but given flow in the Otonabee River compared to the flow in storm outfall it is believed that the impacts would be minimal.

Table 1 – Analytical Results

Parameter	Units	PS Wet Well	Storm Outfall
E. coli	cfu/100mL	8,600,000	14,300
TSS	mg/L	93	3
TP	mg/L	2.13	0.03
TKN	mg/L	12.4	0.3
BOD_5	mg/L	1680	<2.0

There have been multiple force main breaks at this station in recent years and the city is committed to replacing the force main. Due to the proximity of the force main to the historic coal tar contamination, prior to proceeding with the work, the city has retained a consultant that will investigate and develop a management plan for potential contamination that could be encountered during the replacement. This investigation is scheduled to occur in the spring of 2025.

Yours sincerely,



Kent Keeling
Manager, Environmental Protection Services

Appendix C

Parkhill Road Overflow Report

City of Peterborough
500 George Street North Peterborough, ON
K9H 3R9
peterborough.ca | 1-855-738-3755

Kent Keeling
Manager, Environmental Protection Services
Environmental Services
Phone: 705-742-7777, ext. 2629
Email: kkeeling@peterborough.ca

May 6th, 2025

Ministry of the Environment – Peterborough District Office
Robinson Place
300 Water Street, 2nd Floor, South Tower
Peterborough, ON K9J 8M5

Re: Sanitary Sewer Overflow Intersection of Parkhill West and Monaghan Rd, Incident # 1-O1IYNQ

This report is being submitted as required by Schedule E, Section 4.3.1. (c) of ECA No.: 145-W601.

At 6:04 AM on April 23, 2025, staff received notification of sewage backing up out of a manhole at the intersection of Monaghan Road and Parkhill Road West. By 7:15AM staff were on site with a vacuum truck and in the process of clearing the blockage that was causing the overflow.

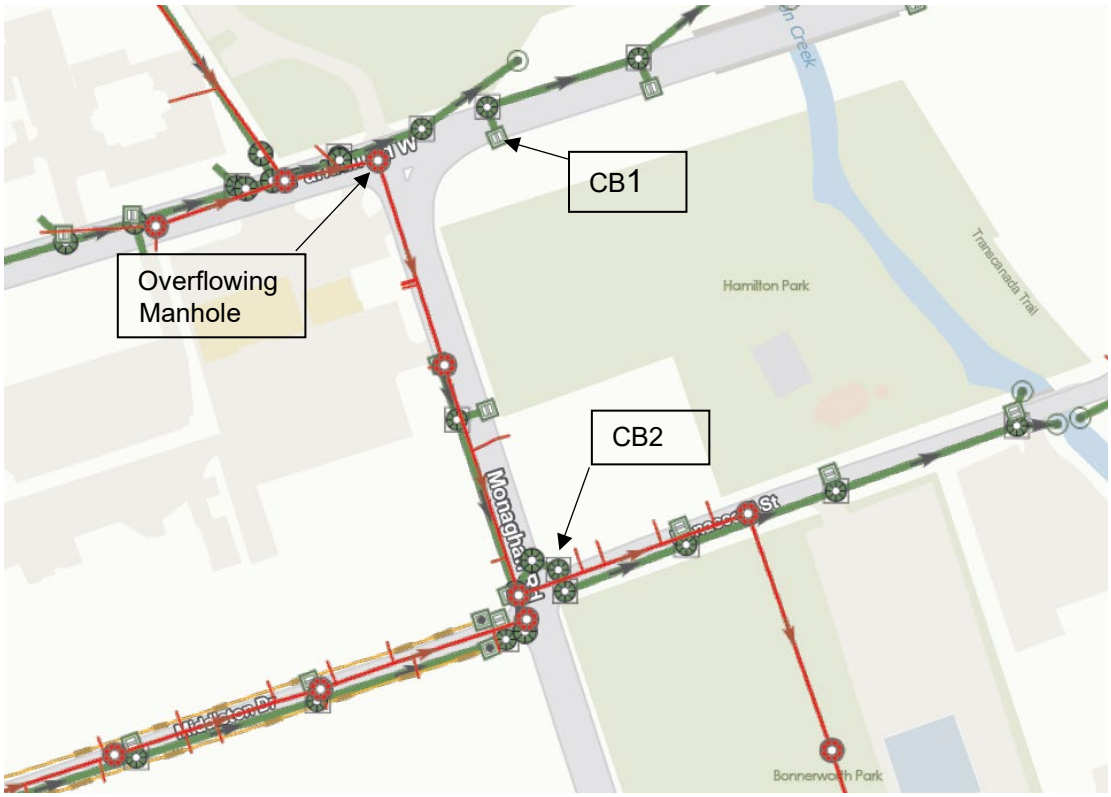
Staff investigation found that runoff from the overflow entered the storm sewer system at two different locations.

1. The catch basin on the southern side of Parkhill Road West to the east of Monaghan Road closest to the overflowing manhole was impacted but the catch basin immediately downstream was dry indicating that sewage did not traverse beyond this initially impacted catch basin. (This is labeled CB1 in Figure 1).
2. The second area that was impacted was the storm sewer system along Monaghan Road heading southward from the overflowing manhole. Investigation determined that sewage did not traverse past a catch basin on northeastern corner of Monaghan Road and Bonaccord Street (Labeled CB2 in Figure 1).

Once the blockage was cleared the vacuum truck began the process of cleaning the impacted storm sewers.

A sample was collected and analyzed in accordance with ECA 145-W601. Results for this sample are attached to this report.

Figure 1 – Sewer Map



Yours sincerely,

Kent Keeling
Manager, Environmental Protection Services

peterborough

Environmental Protection Laboratories

CERTIFICATE OF ANALYSIS

Report To:

City of Peterborough, Waste Management
500 George Street North
Peterborough
K9H 3R9
Attention: Kent Keeling

Lab Report #:	2250695
Report Date:	2025-05-05
Submission #:	PHW20250423
Sampling Date:	2025-04-23
Date Received:	2025-04-23

Please find attached the analytical results relating specifically to the samples submitted to this laboratory as received from the customer.

The following terms may be used in your report:
MDL = Method Detection Limit .
"<" = Less Than

Solid sample results are based on a dry weight basis, unless otherwise indicated.
All supporting analytical information, including measurement uncertainty is available upon request.

Report Authorization:

Krista Thomas

Digitally signed by Krista Thomas
Date: 2025.05.05 15:45:31 -04'00'

Krista Thomas
Chief Chemist/Laboratory Manager (Ext. 2632)

peterborough

Environmental Protection Laboratories

ANALYTICAL REPORT

Lab Report #: 2250695

Report Date: 2025-05-05

Client:	City of Peterborough, Waste Manage
Sampling Location:	FID 131600
Sample Type:	Grab
Sampling Date:	2025-04-23
Substance Sampled:	Sewage
Samples Received:	2025-04-23
Sampled By:	CB
Submission No.:	PHW20250423
Work Order No.:	2250695
Lab Sample #:	189811
Sample ID:	**PHW20250423**

Guideline Limits

Analyte	Result		MDL	Date Analyzed	Lower	Upper	Analytical Method
TSS	135	mg/L	2	2025-04-23		15	APHA 2540D (GRAV)
Phosphorus	0.73	mg/L	0.02	2025-04-23		0.4	SM 3120B
BOD-5	37.5	mg/L	2.0	2025-04-30		15	APHA 5210B
Escherichia coli	600000	CFU/100mL	0	2025-04-24			MFMICRO3371A
TKN	14.3	mg/L	2.0	2025-05-01			SM 4500-Norg D

The Guideline Limits are for the PeterboroughSewerUseByLaw, Storm

Quality Control Information

Analyte	Blank		QC Recovery %	Duplicate %RPD	Uncertainty
TSS	<2	mg/L		4	9
Phosphorus	<0.02	mg/L	95	0	0.13
BOD-5	<2.0	mg/L	98	0	4.8
Escherichia coli	0	CFU/100mL		18	171000
TKN	<2.0	mg/L	96	8	2.3

Comments: Sewer Backup - 601 Parkhill Rd. W