Mississippi Mills Wastewater System

2020 Annual Report

January 1, 2020 – December 31, 2020

Prepared By

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

This report has been prepared to meet the requirements set out in the facility Certificate of Approval #1637-AC8NT7 dated August 8, 2016.

Contents

Compliance Report Card

Compliance Event	# of Events	Details
Ministry of Environment Inspections	0	There were no Inspections during the reporting period
Ministry of Labour Inspections	0	There were no Inspections during the reporting period
Effluent Parameter Exceedances	0	There were no parameter exceedances during the reporting period
Bypass/Overflows	1	Gemmill's Bay SPS • January 11 2020
Community Complaints	0	There were no Community Complaints during the reporting period
Spills	2	Gemmill's Bay SPS • February 8 2020 • August 11 2020

System/Process Description

Flow enters the treatment and passes through screen channels which contain fine screens that lead to a screw compactor. Grit is removed using circular vortex grit removal, air lift and grit classifier system units. Flow then moves to secondary treatment which consists of two (2) treatment trains using the extended aeration activated sludge process. Each train is equipped with aeration tanks, anoxic tanks and a secondary clarifier. Chemicals are added to the process for phosphorus control. Tertiary treatment is achieved using Five (5) filter trains with three (3) filtration cells in each. Disinfection is provided using Ultraviolet (UV) lights. There is ability for chlorine disinfection in the event the UV units fail.

Solids from the biological process are transferred from the waste tank to a rotary disk thickener. From there the solids are processed through autothermic thermophilic aerobic digesters. The solids are then pressed to a cake form.

The Mississippi Mills WWTP also consists of a septage receiving station consisting of a storage tank, two (one duty and one standby) dry-pit pumps, and a grinder on the inlet piping

Proposed Alterations, Extensions, or Replacement to Works

There are no proposed alterations, extensions or replacements that would affect the Certificate of Approval.

Effluent Quality Assurance or Control Measures

The Municipality of Mississippi Mills facilities are part of OCWA's operational Mississippi Cluster. The facilities are supported by regional and corporate resources. Operational Services are delivered by OCWA staff that live and work in the community.

OCWA operates facilities in compliance with applicable regulations. The facility has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents, with annual reviews.

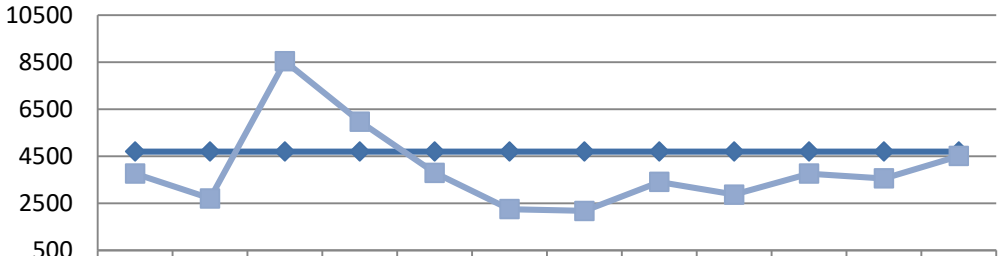
OCWA has additional "Value Added" and operational support services that the Municipality of Mississippi Mills benefits from including:

- Access to a network of operational compliance and support experts at the regional and corporate level, as well as affiliated programs that include the following:
    - Quality & Environmental Management System, Occupational Health & Safety System and an internal compliance audit system
    - Process Data Management (PDM) facility operating information repository, which consolidates field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis
    - Work Management System (WMS) that tracks and reports maintenance activity, and creates predictive and preventative reports
    - Outpost 5 wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming and optimization of staff time
- Client reporting which includes operational data, equipment inventory, financial statements, maintenance work orders, and capital status reports
- Site-Specific Contingency Plans and Standard Operating Procedures
- Use of accredited laboratories
- Additional support in response to unusual circumstances, and extra support in an emergency.
- Use of sampling schedules for external laboratory sampling

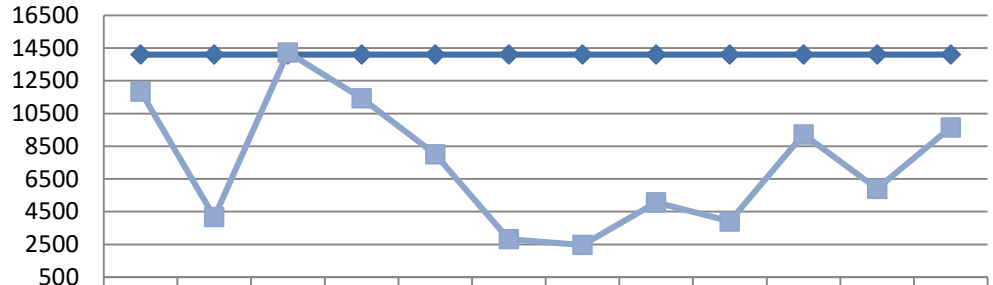
Treatment Flows

Raw Flow (m³/d)

Compliance is calculated as an annual average flow. The annual average flow for 2020 was 3,951.7 m³/d, which is in compliance with the limit of 4700 m³/d. The flow spikes are associated to wet weather events such as rain and seasonal changes such as the spring snow melt.

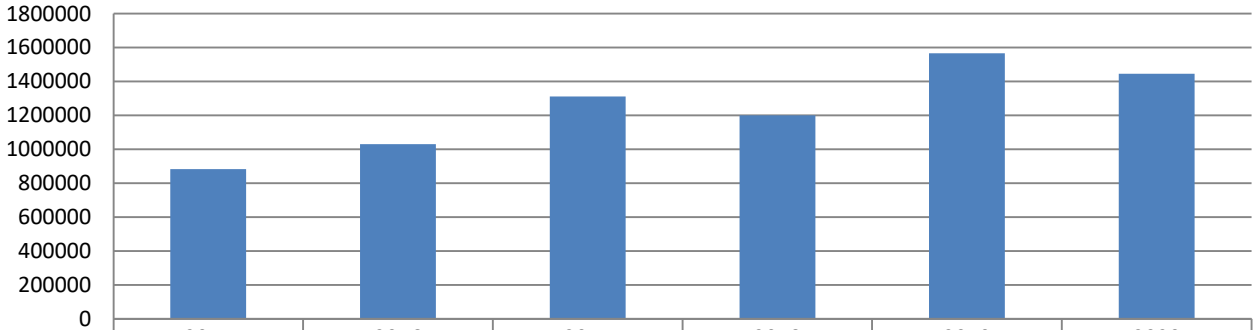


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Design Average (m³/d)	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700	4700
Average Daily Flow (m³/d)	3761	2705	8543	5971	3798	2246	2176	3408	2868	3758	3556	4512



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Capacity (m³/d)	14100	14100	14100	14100	14100	14100	14100	14100	14100	14100	14100	14100
Maximum Daily Flow (m³/d)	11846	4166	14226	11434	8012	2825	2468	5071	3908	9229	5899	9649

Annual Comparison (m³)



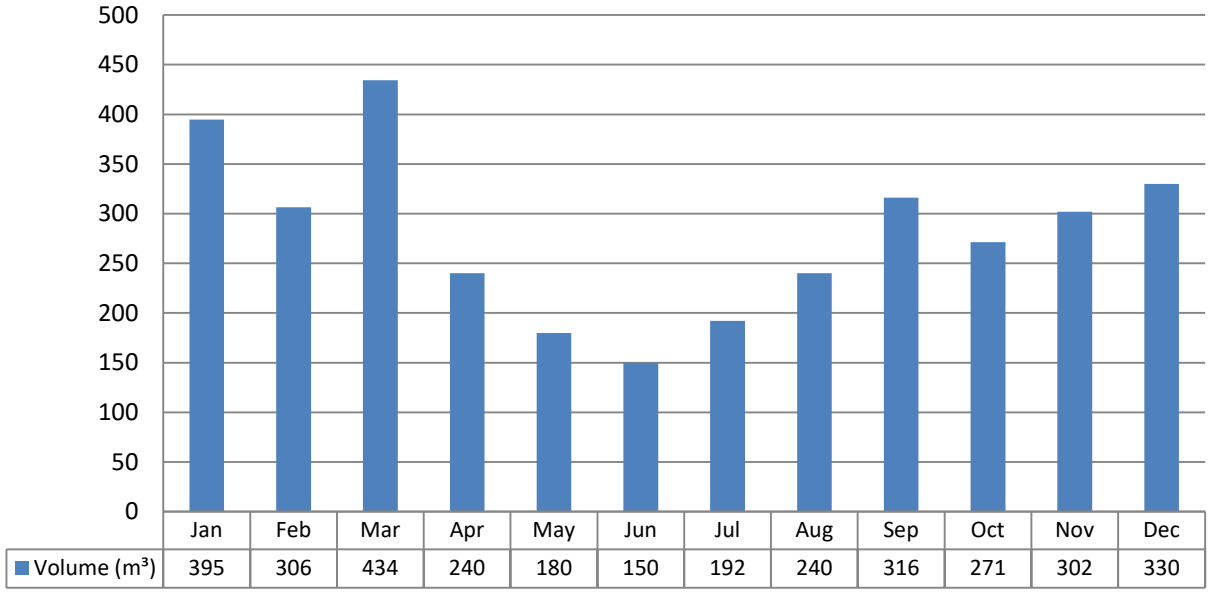
	2015	2016	2017	2018	2019	2020
Total Annual Flow	884055	1031585	1312674	1201247	1566983	1446310

Septage Volumes

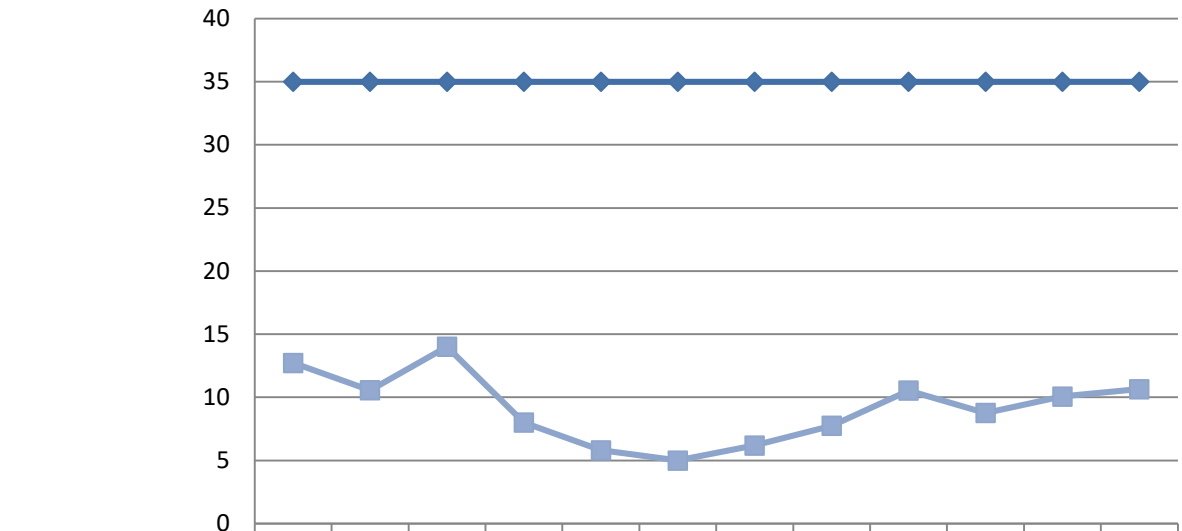
Average daily flow for 2020 = 9.2 m³/d
Total Volume for 2020 = 3356.7 m³

Septage flows are included in the Raw Flows as it enters the influent stream prior to the raw flow meter.

Total Monthly Volume Received



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Volume (m³)	395	306	434	240	180	150	192	240	316	271	302	330



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Design Avg Flow	35	35	35	35	35	35	35	35	35	35	35	35
Avg Daily Flow	13	11	14	8	6	5	6	8	11	9	10	11

Raw Sewage Quality

Results of raw sewage concentrations and loadings are available in the Facility Performance Assessment Report in Appendix A.

Effluent Quality

The limits are based on current requirements in the facilities Environmental Compliance Approval. Laboratory samples are submitted to an accredited laboratory for regulatory analysis.

The Federal Government also regulates certain sewage effluent parameters under the Federal Fisheries Act. The results are submitted to Environment and Climate Change Canada's Effluent Regulatory and Reporting Information System (ERRIS) on a quarterly basis.

Effluent Exceedance Summary

Date	Parameter	Exceedance	Limit	Value	Corrective Action
There were no effluent exceedances during the reporting period					

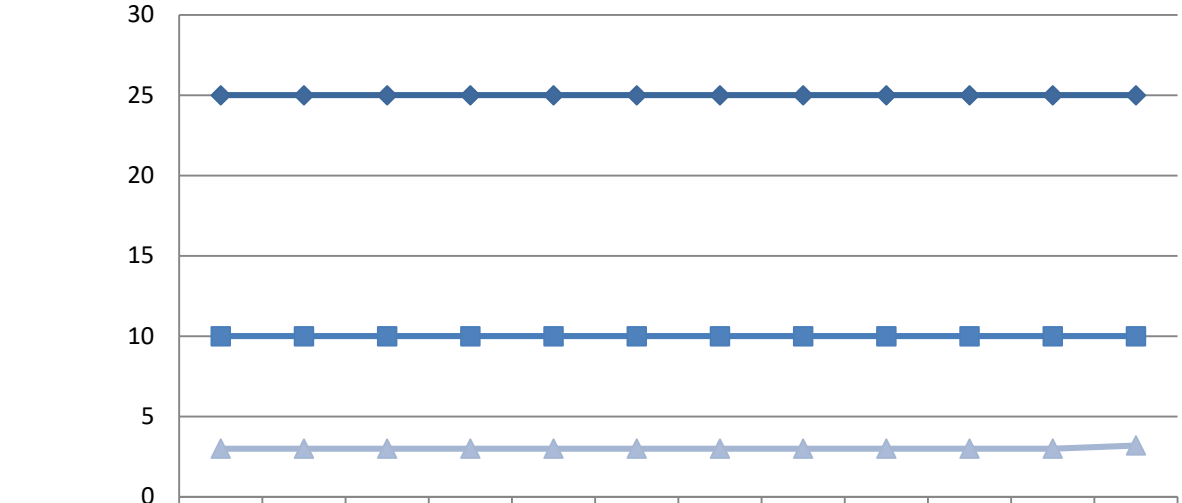
Other Effluent Sampling Issues

Sample	Legislation	Date	Details	Response
The were no effluent sampling issues during the reporting period				

Effluent Parameter Summary

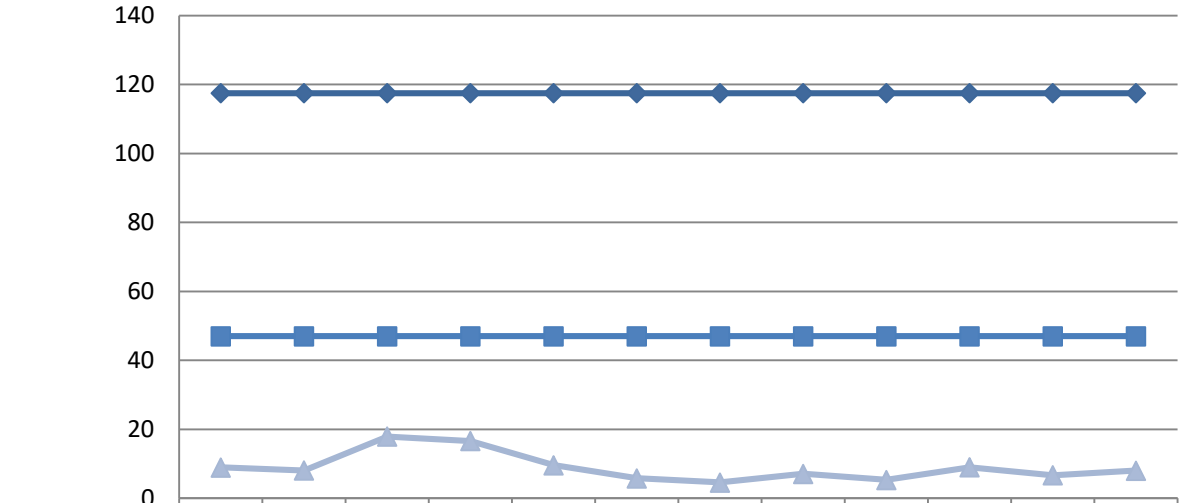
CBOD5

Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	25	25	25	25	25	25	25	25	25	25	25	25
Objective	10	10	10	10	10	10	10	10	10	10	10	10
Average	3	3	3	3	3	3	3	3	3	3	3	3.2

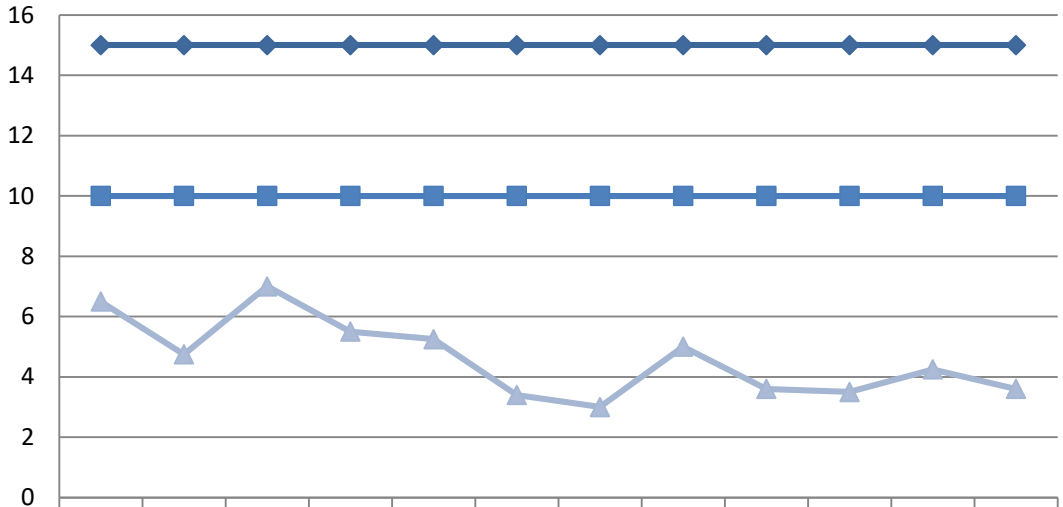
Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5
Objective	47	47	47	47	47	47	47	47	47	47	47	47
Average	9.0	8.1	17.9	16.6	9.6	5.8	4.6	7.1	5.3	9.0	6.7	8.0

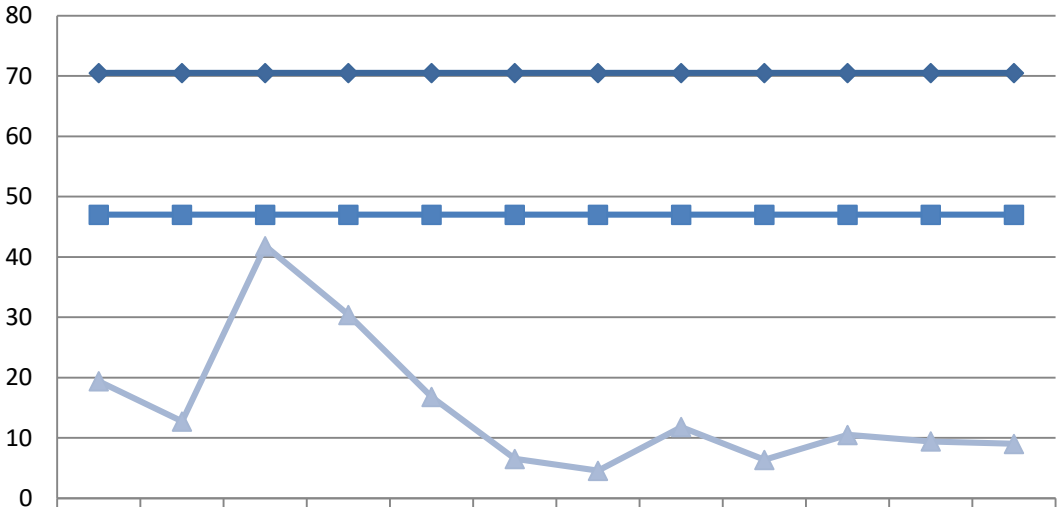
Total Suspended Solids

Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	15	15	15	15	15	15	15	15	15	15	15	15
Objective	10	10	10	10	10	10	10	10	10	10	10	10
Average	6.5	4.8	7.0	5.5	5.3	3.4	3.0	5.0	3.6	3.5	4.3	3.6

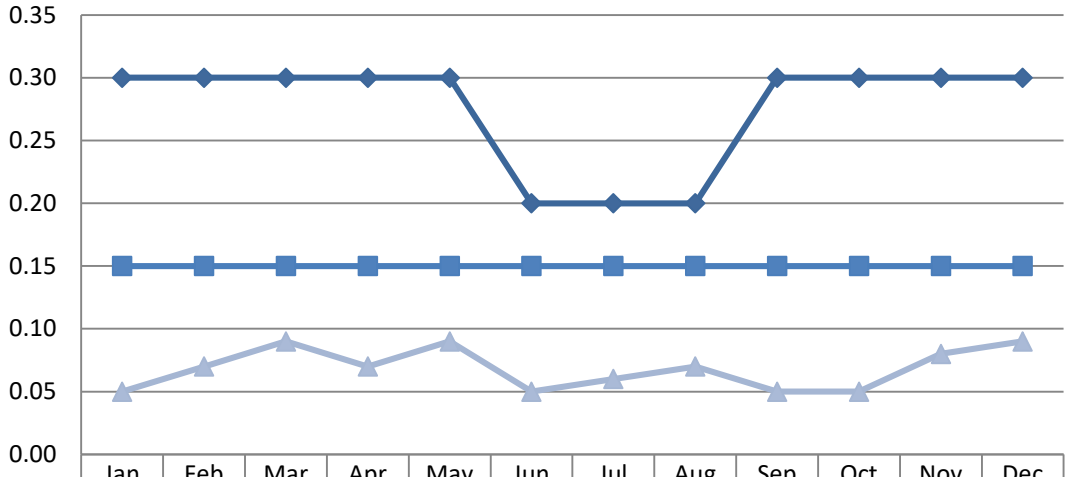
Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
Objective	47	47	47	47	47	47	47	47	47	47	47	47
Average	19.4	12.8	41.8	30.4	16.8	6.5	4.6	11.8	6.4	10.5	9.4	9.0

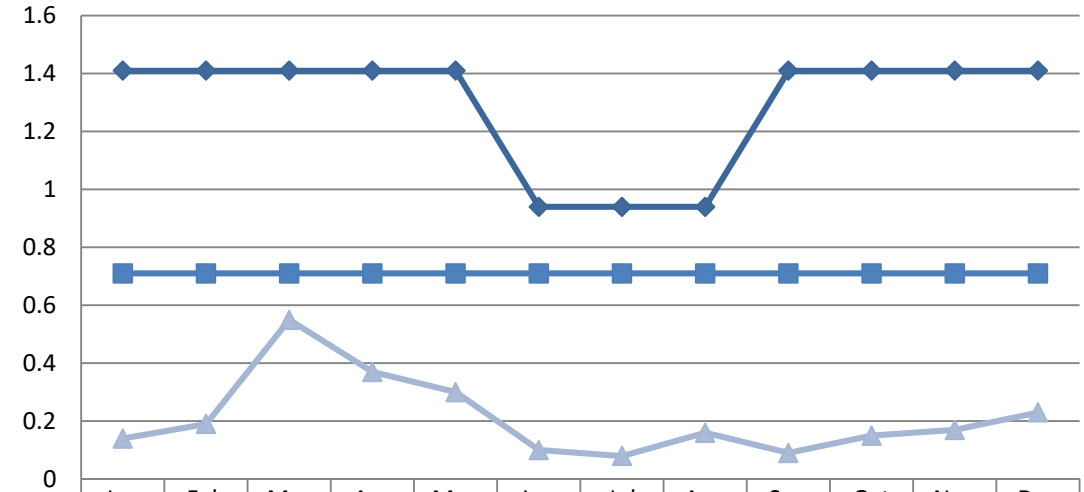
Total Phosphorus

Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	0.30	0.30	0.30	0.30	0.30	0.20	0.20	0.20	0.30	0.30	0.30	0.30
Objective	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Average	0.05	0.07	0.09	0.07	0.09	0.05	0.06	0.07	0.05	0.05	0.08	0.09

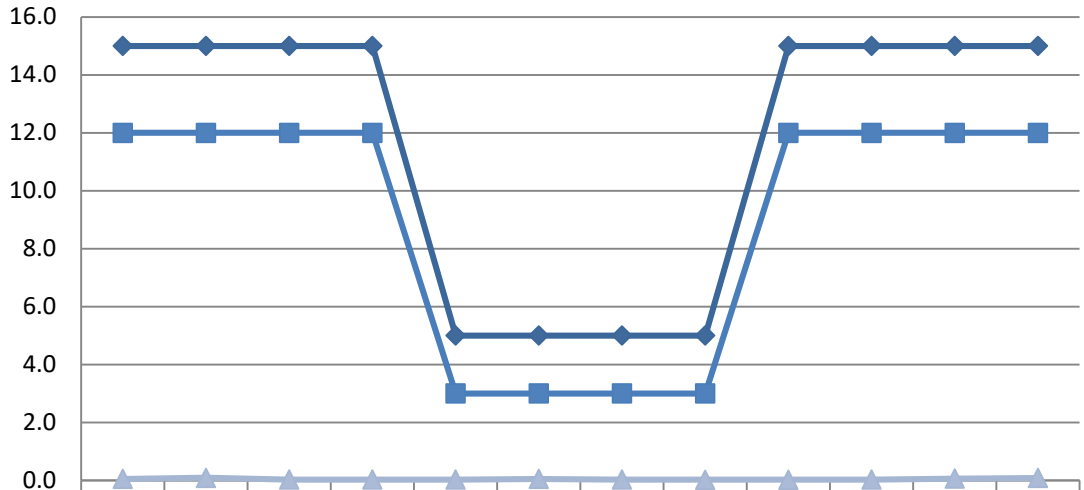
Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	1.41	1.41	1.41	1.41	1.41	0.94	0.94	0.94	1.41	1.41	1.41	1.41
Objective	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Average	0.14	0.19	0.55	0.37	0.30	0.10	0.08	0.16	0.09	0.15	0.17	0.23

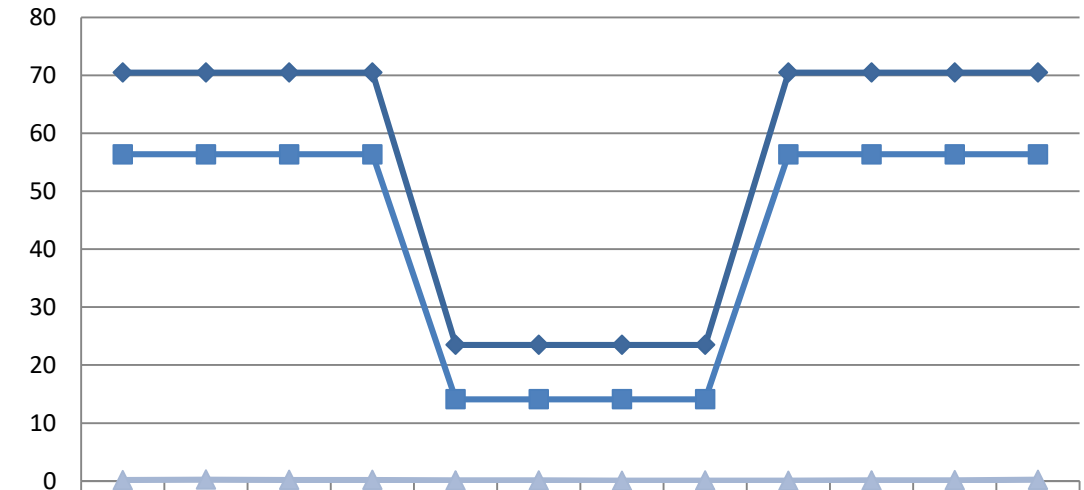
Total Ammonia Nitrogen

Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	15.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	15.0	15.0	15.0	15.0
Objective	12.0	12.0	12.0	12.0	3.0	3.0	3.0	3.0	12.0	12.0	12.0	12.0
Average	0.05	0.09	0.03	0.03	0.03	0.05	0.03	0.02	0.02	0.03	0.06	0.08

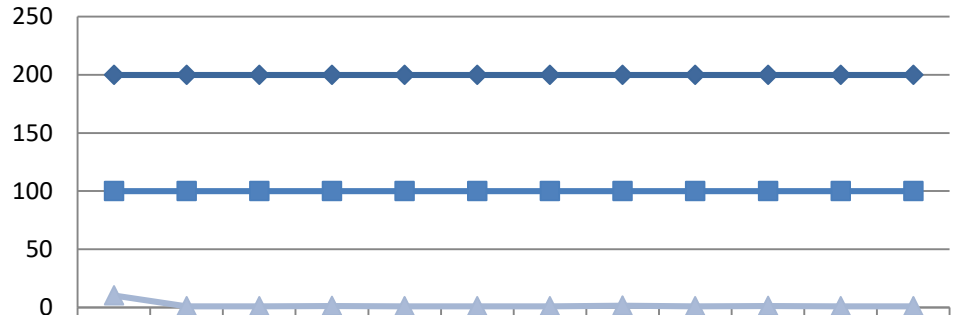
Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	70.5	70.5	70.5	70.5	23.5	23.5	23.5	23.5	70.5	70.5	70.5	70.5
Objective	56.4	56.4	56.4	56.4	14.1	14.1	14.1	14.1	56.4	56.4	56.4	56.4
Average	0.16	0.25	0.18	0.18	0.10	0.09	0.05	0.06	0.04	0.09	0.12	0.20

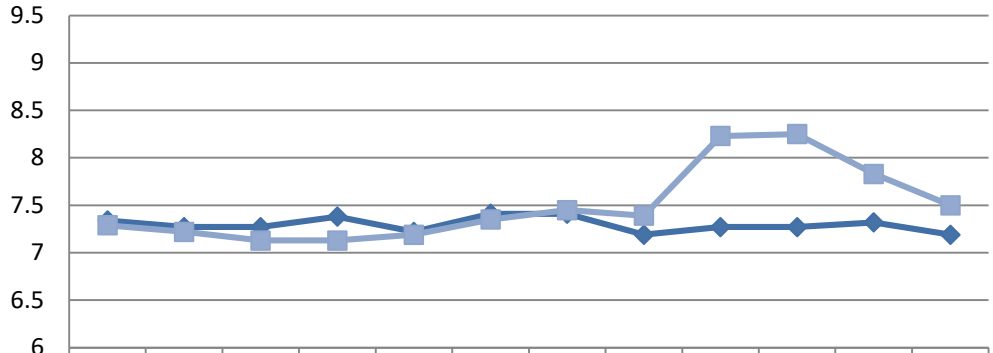
E-coli

Geometric Mean Average



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	200	200	200	200	200	200	200	200	200	200	200	200
Objective	100	100	100	100	100	100	100	100	100	100	100	100
Geometric Mean Avg	10.3	1.0	1.0	1.2	1.0	1.0	1.0	1.5	1.0	1.2	1.0	1.0

pH



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Monthly pH	7.34	7.27	7.27	7.38	7.22	7.41	7.41	7.19	7.27	7.27	7.32	7.19
Max Monthly pH	7.29	7.22	7.13	7.13	7.19	7.35	7.45	7.39	8.23	8.25	7.83	7.5

Acute Lethality

There were four (4) samples collected in 2020 and tested for acute lethality (Rainbow Trout and Daphnia Magna). Results are displayed as % mortality.

Quarter	Rainbow Trout	Daphnia Magna
1st Quarter	0%	0%
2nd Quarter	0%	0%
3rd Quarter	0%	0%
4th Quarter	0%	0%

Septage Quality

Septage was tested when received. A summary of the results are attached in Appendix B. Grab samples are collected from each load.

The spill containment area for the septage receiving station received an upgrade in 2020. The upgrade included relocate piping to the catch basin adjacent to the WWTP, relocated piping to the septage tank in the WWTP and proper slope of septage receiving station to ensure no spill or overflow from the spill containment area to the natural environment will occur.

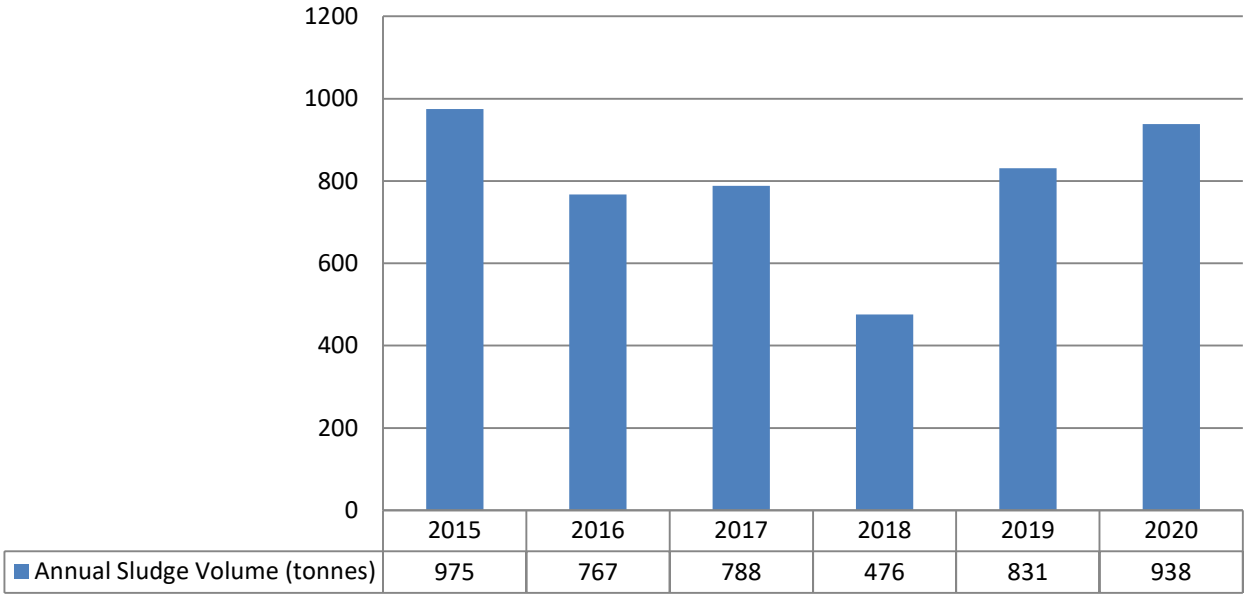
Biosolids

Sludge generated from the treatment plant was spread on agricultural land during the spreading season as per the Nutrient Management Act O.Reg 267/03. This facility dewaters and biosolids are handled as cake. During the winter cake is stored on-site until certified sites are ready for spreading.

Biosolids Disposal Summary

Date	Site	NASM Plan number	Volume (MT)
May 12 2020	Cochran – Steele	23782	470.5
November 9 2020	Cochran - Steele	23782	366.9
		Total	938.4

Annual Comparison



Quality

The biosolids sampling results are summarized in Appendix C. All results met the established guidelines.

Summary of Complaints

The following community complaints were received related to the operations of the Mississippi Mills WWTP.

Date	Location	Details
There were no community complaints for the reporting period.		

Summary of Bypass/Overflows

Event	Details of Events
Gemmill's Bay SPS January 11 2020	A heavy rain and snow melt caused high flows at Gemmill's Bay sewage pumping station. Both pumps were running at full speed could not keep up with the flow. This resulted in an overflow of raw sewage.

Summary of Spills/Abnormal Discharges

Event	Details of Events
Gemmill's Bay SPS February 8 2020	Staff received a high wet well alarm and arrived at Gemmill's Bay SPS to find no power. The Transfer Switch was stuck in the neutral position which caused the diesel generator backup to be off line. This resulted in an overflow of raw sewage.
Gemmill's Bay SPS August 11 2020	Power outage throughout the municipality and no back up power through the Transfer Switch was available caused the overflow raw sewage at Gemmill's Bay SPS. This resulted in an overflow of raw sewage.

Maintenance

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer's and/or industry standards. Maintenance is completed using various tools and operational supports. The Ottawa Valley Hub has specialized certified staff such as Millwrights, Electricians and Instrumentation Specialists to name a few.

OCWA uses a Workplace Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.

Capital projects are listed and provided to the Municipality of Mississippi Mills in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.

Maintenance Highlights

Gemmill's Bay Sewage Pumping Station is equipped with a diesel generator and an automatic transfer switch to provide backup power to the pumping station in the event of a power outage. The transfer switch was replaced in 2020.

WO #	Summary
1621936	Capital Turbo Blower 3 Replacement
1621945	Capital ATAD Roof repair
1624582	Capital Replaced 2 CH4 Detectors
1624602	Capital Replacement Pump parts
1662000	Capital SCADA Work by Capital Controls
1793282	Capital Repair to backflow preventers
1873056	Capital Install davit sockets for aeration tanks
1873204	Capital Capital Controls Onsite Troubleshooting Dewatering Control Panel
1875388	Capital Clarifier 1 Repairs
1916523	Capital Replaced motion sensor for Cake
1917270	Capital Fabricate and install 2 davit bases for anoxic mixers
1917742	Capital Parts for Clarifiers
1918334	Capital Odour Remediation
1959634	Capital Annual fastener order
1963992	Capital Replaced Hach pH meter with new one
1963993	Capital Printer
1997569	Capital pH electrode for YSI
1999593	Capital EAU 2 replace motor bearings
1622788	Capital Replace wear parts on wash press
1623855	Capital Parts for Sand lifts
1662834	Capital Bruce Mechanical onsite for boiler repair visit and troubleshoot HVAC

WO #	Summary
1707165	Capital Blower 2 Repairs
1871957	Capital Fire Alarm Panel Battery Replacement
1871961	Capital Wear parts for Bar screen and compactor
1874124	Capital D.O control limitations
1999995	Capital Septage annual website hosting fee
2000170	Capital Incline conveyor gearbox in cake barn
2000176	Capital Replace blower motor on boiler # 2
2000915	Capital Troubleshoot aeration sludge pump
2001049	Capital Replacement Combustion Blower on Boiler #2
2001685	Capital Blower 3 Repairs
2036630	Capital Replace Turbo Blower 3 breaker
2038281	Capital New SCADA system printer

Calibration

The flow meters were calibrated on January 30, 2020. Records are attached in Appendix D. Analyzers are scheduled for maintenance in the WMS program. Work is completed and logged in the logbook and in the WMS.

Collection Highlights

Collection Highlights were provided by the Municipality of Mississippi Mills.

Collection Highlights

Maintenance & Operations

- One (1) quarter of Town of Almonte flushed and CCTV
- Sewer inspection program
- Several repairs – multiple laterals to main line
- Preventative flushing
- New sewer mains commissioned in White Tail Ridge Phase 2 Subdivision, Mill Run Phase 5 Subdivision

Planning Initiatives

- New sewer mains commissioning in White Tail Ridge, Mill Run Subdivision, Industrial Area
- Lining of a section of Mitcheson Street
- Preventative flushing

Appendix A

Facility Assessment Report

Ontario Clean Water Agency
Performance Assessment Report Wastewater/Lagoon

From: **01/01/2020 to 31/12/2020**

Facility: **[5678] MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY**
Works: **[110000873]**

	01/2020	02/2020	03/2020	04/2020	05/2020	06/2020	07/2020	08/2020	09/2020	10/2020	11/2020	12/2020	<--Total-->	<--Avg-->	<--Max-->	<--Criteria-->
Flows:																
Raw Flow: Total - Raw Sewage (m^3)	116588.36	78439.56	264825.26	179142.35	117731.28	67379.63	67451.35	105662.83	86026.58	116501.79	106693.79	139866.99	1446309.77			
Raw Flow: Avg - Raw Sewage (m^3/d)	3760.91	2704.81	8542.75	5971.41	3797.78	2245.99	2175.85	3408.48	2867.55	3758.12	3556.46	4511.84		3941.83		
Raw Flow: Max - Raw Sewage (m^3/d)	11845.95	4165.75	14225.63	11434.39	8012.03	2824.70	2468.38	5071.46	3907.88	9229.01	5898.90	9649.16			14225.63	
Eff. Flow: Total - Final Effluent (m^3)	92545.86	77856.72	185173.73	165896.23	99278.32	57714.64	47189.14	73171.55	53119.34	93145.53	66547.07	77833.76	1089471.89			
Eff. Flow: Avg - Final Effluent (m^3/d)	2985.35	2684.71	5973.35	5529.87	3202.53	1923.82	1522.23	2360.37	1770.64	3004.69	2218.24	2510.77		2973.88		
Eff. Flow: Max - Final Effluent (m^3/d)	6015.80	3810.69	8705.21	7084.46	5940.66	2368.71	1833.69	3721.20	2576.65	6862.41	3558.00	4245.38			8705.21	
Carbonaceous Biochemical Oxygen Demand: CBOD:																
Raw: # of samples of cBOD5 - Raw Sewage (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Eff: Avg cBOD5 - Final Effluent (mg/L)	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.200		< 3.017	< 3.200	25.0
Eff: # of samples of cBOD5 - Final Effluent (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Loading: cBOD5 - Final Effluent (kg/d)	< 8.956	< 8.054	< 17.920	< 16.590	< 9.608	< 5.771	< 4.567	< 7.081	< 5.312	< 9.014	< 6.655	< 8.034		< 8.963	< 17.920	117.5
Percent Removal: cBOD5 - Raw Sewage (mg/L)	96.542	97.880	96.134	92.453	97.531	98.809	98.608	97.315	98.013	98.049	97.463	96.929			98.809	
Biochemical Oxygen Demand: BOD5:																
Raw: # of samples of BOD5 - Raw Sewage (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Eff: Avg BOD5 - Final Effluent (mg/L)	< 3.000	< 3.000	< 3.000	< 3.500	< 3.000	< 3.200	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000	< 3.000		< 3.058	< 3.500	25.0
Loading: BOD5 - Final Effluent (kg/d)	< 8.956	< 8.054	< 17.920	< 19.355	< 9.608	< 6.156	< 4.567	< 7.081	< 5.312	< 9.014	< 6.655	< 7.532		< 9.184	< 19.355	
Percent Removal: BOD5 - Raw Sewage (mg/L)	97.674	98.425	96.888	93.722	98.030	99.036	98.658	98.370	98.614	98.233	97.997	97.741			99.036	
Total Suspended Solids: TSS:																
Raw: Avg TSS - Raw Sewage (mg/L)	220.000	195.000	205.000	98.750	162.500	318.000	266.250	212.500	347.000	130.000	287.500	209.000		220.958	347.000	
Raw: # of samples of TSS - Raw Sewage (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Eff: Avg TSS - Final Effluent (mg/L)	6.500	< 4.750	7.000	5.500	< 5.250	< 3.400	< 3.000	< 5.000	< 3.600	3.500	< 4.250	< 3.600		< 4.613	7.000	15.0
Eff: # of samples of TSS - Final Effluent (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Loading: TSS - Final Effluent (kg/d)	19.405	< 12.752	41.813	30.414	< 16.813	< 6.541	< 4.567	< 11.802	< 6.374	10.516	< 9.428	< 9.039		< 14.955	41.813	70.5
Percent Removal: TSS - Raw Sewage (mg/L)	97.045	97.564	96.585	94.430	96.769	98.931	98.873	97.647	98.963	97.308	98.522	98.278			98.963	
Total Phosphorus: TP:																
Raw: Avg TP - Raw Sewage (mg/L)	3.655	5.328	3.872	2.490	4.745	9.834	8.908	4.530	11.236	5.475	5.725	3.942		5.812	11.236	
Raw: # of samples of TP - Raw Sewage (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Eff: Avg TP - Final Effluent (mg/L)	0.048	0.070	0.092	0.067	0.093	0.052	0.055	0.068	0.052	0.050	0.075	0.090		0.068	0.093	0.2 - 0.3
Eff: # of samples of TP - Final Effluent (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Loading: TP - Final Effluent (kg/d)	0.142	0.188	0.550	0.373	0.296	0.100	0.084	0.159	0.092	0.150	0.166	0.226		0.211	0.550	1.41
Percent Removal: TP - Raw Sewage (mg/L)	98.700	98.686	97.624	97.289	98.051	99.471	99.383	98.510	99.537	99.087	98.690	97.717			99.537	
Nitrogen Series:																
Raw: Avg TKN - Raw Sewage (mg/L)	28.200	30.925	21.260	13.525	27.150	48.800	47.800	28.275	54.960	34.150	41.750	28.380		33.765	54.960	
Raw: # of samples of TKN - Raw Sewage (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Eff: Avg TAN - Final Effluent (mg/L)	0.053	0.093	0.030	0.033	0.033	0.048	0.033	< 0.025	0.022	< 0.030	0.055	0.078		< 0.044	0.093	5.0 - 15.0
Eff: # of samples of TAN - Final Effluent (mg/L)	4	4	5	4	4	5	4	4	5	4	4	5	52			
Loading: TAN - Final Effluent (kg/d)	0.157	0.248	0.179	0.180	0.104	0.092	0.049	< 0.059	0.039	< 0.090	0.122	0.196		< 0.126	0.248	70.5
Disinfection:																
Eff: GMD E. Coli - Final Effluent (cfu/100mL)	10.300	1.000	1.000	1.189	1.000	1.000	1.000	1.495	1.000	1.189	1.000	1.000		1.848	10.300	200.0
Eff: # of samples of E. Coli - Final Effluent (cfu/100mL)	4	4	5	4	4	5	4	4	5	4	4	5	52			

Appendix B

Septage Sample Data

Ontario Clean Water Agency
Time Series Info Report

From: 01/01/2020 to 31/12/2020

Facility Org Number: 5678
Facility Works Number: 110000873
Facility Name: MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY
Facility Owner: Municipality: Municipality of Mississippi Mills
Facility Classification: Class 3 Wastewater Treatment
Receiver: Mississippi River
Service Population:
Total Design Capacity: 14100.0 m3/day

	01/2020	02/2020	03/2020	04/2020	05/2020	06/2020	07/2020	08/2020	09/2020	10/2020	11/2020	12/2020	Total	Avg	Max	Min
Septage / Biochemical Oxygen Demand: BOD5 - mg/L																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	4810	2580	2720			7800	5320								7800	
Mean Lab	1278.357	886.375	1033.417			7800	5320							1455.052		
Min Lab	86	130	110			7800	5320									86
Septage / Total Kjeldahl Nitrogen: TKN - mg/L																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	2010	1170	892			2920	2320								2920	
Mean Lab	714.957	327.838	218.492			2920	2320							594.466		
Min Lab	18.8	79.1	67.3			2920	2320									18.8
Septage / Total Phosphorus: TP - mg/L																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	164	96.7	67.9			235	165								235	
Mean Lab	53.839	37.555	24.914			235	165							50.561		
Min Lab	3.64	8.34	7.86			235	165									3.64
Septage / Total Solids: TS - mg/L																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	11200	5300	27500			11400	9900								27500	
Mean Lab	4135.714	2557.5	6872.5			11400	9900							4604.828		
Min Lab	180	780	1340			11400	9900									180
Septage / Total Suspended Solids: TSS - mg/L																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	8700	3700	10000			2900	2600								10000	
Mean Lab	2352.143	1446.25	2606.25			2900	2600							2108.103		
Min Lab	150	200	65			2900	2600									65
Septage / pH - ---																
Count Lab	14	8	12	0	0	1	1	0	0	0	0	0	36			
Max Lab	8.83	8.8	8.65			7.19	7.05								8.83	
Mean Lab	7.959	7.623	7.457			7.19	7.05							7.646		
Min Lab	6.54	6.72	6.79			7.19	7.05									6.54

Appendix C

Biosolids Quality

Ontario Clean Water Agency
Biosolids Quality Report - Liquid
Digestor Type: AEROBIC
Solids and Nutrients

Facility: MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY
Works: 5678
Period: 01/01/2020 to 12/01/2020

Facility Works Number: *1.10000873E8*
Facility Name: *MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY*
Facility Owner: *Municipality: Municipality of Mississippi Mills*
Facility Classification: *Class 3 Wastewater Treatment*
Receiver: *Mississippi River*
Service Population:
Total Design Capacity: *14100.0 m3/day*
Period Being Reported: 01/01/2020 12/01/2020

Note: all parameters in this report will be derived from the Bslq Station

Month	Total Sludge Hauled (m3)	Avg. Total Solids (mg/L)	Avg. Volatile Solids (mg/L)	Avg. Total Phosphorus (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Ammonia + Nitrate (mg/L)	Potassium (mg/L)
Site	**MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY**									
Station	**Bslq Station only**									
Parameter Short Name	**HauledVol**	**TS**	**VS**	**TP**	**NH3p_NH4p_N**	**NO3-N**	**NO2-N**	**TKN**	**calculation in report - no T/S**	**K**
T/s	**IH Month.Total**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**		**Lab Published Month Mean**
Jan		43,950.000	23,400.000	1,080.000	2.990	120.500	0.150	1,950.000	61.745	
Feb		37,250.000	20,300.000	1,178.500	1.970	191.500	0.550	2,015.000	96.735	
Mar		35,000.000	19,100.000	987.000	2.720	271.000	0.100	1,895.000	136.860	
Apr										
May										
Jun										
Jul										
Aug										

Sep										
Oct										
Nov		44,800.000	24,800.000	1,840.000	7.225	40.350	1.650	2,350.000	23.788	
Dec		53,550.000	29,750.000	1,355.000	5.120	88.950	0.850	1,605.000	47.035	
Average		42,910.000	23,470.000	1,288.100	4.005	142.460	0.660	1,963.000	73.233	
Total	0.000	214,550.000	117,350.000	6,440.500	20.025	712.300	3.300	9,815.000	366.163	0.000

Ontario Clean Water Agency
Biosolids Quality Report - Liquid - Based on Last 4 Samples
Digestor Type: AEROBIC

Facility: MISSISSIPPI MILLS WASTEWATER TREATMENT FACILITY
Works: 5678
Period: 01/01/2020 to 12/01/2020

Note: all parameters in this report will be derived from the Bslq Station

Parameter Short Name	Time Series	11/03/2020	11/17/2020	12/01/2020	12/14/2020	Average	Metal Concentrations in Sludge (mg/kg):	Max. Permissible Metal Concentrations (mg/kg of Solids):
As (mg/L)	Lab Published							170
Cd (mg/L)	Lab Published							34
Co (mg/L)	Lab Published							340
Cr (mg/L)	Lab Published							2800
Cu (mg/L)	Lab Published							1700
Hg (mg/L)	Lab Published							11
Mo (mg/L)	Lab Published							94
Ni (mg/L)	Lab Published							420
Pb (mg/L)	Lab Published							1100
Se (mg/L)	Lab Published							34
Zn (mg/L)	Lab Published							4200
E. Coli: Dry Wt (cfu/g)	Lab Published						E.Coli average is the GMD	
TS (mg/L)	Lab Published	40,400.000	49,200.000	57,400.000	49,700.000	49,175.000		
VS (mg/L)	Lab Published	21,400.000	28,200.000	32,400.000	27,100.000	27,275.000		
TP (mg/L)	Lab Published	1,790.000	1,890.000	1,650.000	1,060.000	1,597.500		
NO2-N (mg/L)	Lab Published	2.300	1.000	0.700	1.000	1.250		
TKN (mg/L)	Lab Published	2,260.000	2,440.000	2,090.000	1,120.000	1,977.500		
K (mg/L)	Lab Published							
NH3p_NH4p_N (mg/L)	Lab Published	6.430	8.020	6.750	3.490	6.172		
NO3-N (mg/L)	Lab Published	43.000	37.700	55.900	122.000	64.650		

Appendix D

Calibration Records

CapitalControls
Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

The Town of Almonte

Waste Water
Calibration / Verification of Instrumentation

Report January 30, 2020

Calibration Date: January 28, 2020

Calibration Due: January 28, 2021

Verifications performed by Tim Stewart

Report prepared by Tim Stewart

CapitalControls
Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

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CapitalControls
Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

1 List of Verified Devices

This letter is to confirm that annual verification on the following devices has been completed. Results of the all verifications are listed below.

ID	Process	Make/Model	Results
FIT-310	Septage Inlet Grinder	E&H/ Promag 53W	Passed
FIT-350	Septage Tank	E&H/ Promag 53P	Passed
FIT-611	R.A.S.	E&H/ Promag 10P	Passed
FIT-612	W.A.S.	E&H/ Promag 10P	Passed
FIT-631	R.A.S.	E&H/ Promag 10P	Passed
FIT-621	R.A.S.	E&H/ Promag 10P	Passed
FIT-622	W.A.S.	E&H/ Promag 10P	Passed
FIT-632	W.A.S.	E&H/ Promag 10P	Passed
FIT-750	Filtrate Tank	E&H/ Promag 10P	Passed
FIT-1091	Service Water	E&H/ Promag 10P	Passed
FIT-405	Attenuation	E&H/ Promag 53P	Passed
FIT-946	Fournier Press #1 Polymer	E&H/ Promag 50P	Passed
FIT-940	Fournier Press#1 Sludge	E&H/ Promag 50W	Passed
FIT-956	Fournier Press #2 Polymer	E&H/ Promag 50P	Passed
FIT-950	Fournier Press#2 Sludge	E&H/ Promag 50W	Passed
FIT-470	Raw Sewage Vortex #1	Siemens/Multiranger200	Passed
FIT-480	Raw Sewage Vortex #1	Siemens/Multiranger200	Passed
FIT-01	White Tail Ridge	E&H/ Promag 10	Passed
FIT-700	Plant	Rosemount/871	Passed
FIT-1180	Final Effluent	Siemens/OCM III	Passed

Signed by Field Technician:

Tim Stewart

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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2 Equipment Used

The following equipment was used to perform the calibrations:

Fluke 725 Multifunction Process Calibrator used to measure current and pressure.

Level Simulator for the Flume Flow Meters

Endress and Hauser FieldCheck for Magnetic Flow Meters

3 Procedures Used

To verify the equipment standard verification procedures developped by the Township were used and standard industry practice.

3.1 Flowmeter Verification

Verification, Magnetic Flow Meter:

The verification of Endress & Hauser Flow measuring devices (the device under test) are checked for the following characteristic values:

1. Functionality and deviation in flow measurement.

2. Deviation in the current and frequency outputs in reference to the flow rate data determined by the measuring device.

Measuring devices: The verification system consists of the FlowCheck flow simulator, the Simubox and the appropriate connection cables.

FieldCheck: The FieldCheck flow simulator generates the flow simulation signals and processes the measured values sent back from the transmitter.

Simubox: The Simubox ensures that the FieldCheck simulation signal are correctly converted in the transmitter, by comparing the measurements returned from the transmitter to data stored within the Simubox for various parameters (Electromagnetic Field vs. Flow, Flow vs. Current, and various other parameters important in verifying the proper functionally of the device under test.

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Verification of Flume Flow Meters:

By use of a mechanical level simulating tool installed in the Parshall Flume an exact level can be simulated causing the transmitter to display flow based on the simulator adjusted level.

Shown below is a picture of a simple level simulator used to simulate flows/levels in a Parshall Flume.

By adjusting the reflector upward from the bottom ridge of the base, which will sit on the floor of the flume directly under the level sensor, the flow meter will transmit and display the flow proportional to the simulated level. In this case a 24inch Parshall flume with the simulator set to 240mm can be verified against the chart on the next page. The flow on the transmitter should be comparable to 156.4 l/s.

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FLOW CHART
GREYLINE INSTRUMENTS INC.
24" Parshall Flume

Formula: Q = KH^n,
where: Q = Flow in Liters per Second.
K = 0.031982
H = Head in Millimeters.
n = 1.5500
H maximum: 750.0 Millimeters
H increment: 5 Millimeters

mm	L/s	mm	L/s	mm	L/s	mm	L/s
5.000	0.3875	195.0	113.4	385.0	325.4	575.0	605.9
10.00	1.135	200.0	117.9	390.0	331.9	580.0	614.1
15.00	2.127	205.0	122.5	395.0	338.6	585.0	622.3
20.00	3.323	210.0	127.2	400.0	345.2	590.0	630.6
25.00	4.696	215.0	131.9	405.0	351.9	595.0	638.9
30.00	6.229	220.0	136.7	410.0	358.7	600.0	647.2
35.00	7.911	225.0	141.5	415.0	365.5	605.0	655.6
40.00	9.730	230.0	146.4	420.0	372.3	610.0	664.0
45.00	11.68	235.0	151.4	425.0	379.2	615.0	672.5
50.00	13.75	240.0	156.4	430.0	386.2	620.0	681.0
55.00	15.94	245.0	161.5	435.0	393.2	625.0	689.5
60.00	18.24	250.0	166.6	440.0	400.2	630.0	698.1
65.00	20.65	255.0	171.8	445.0	407.3	635.0	706.7
70.00	23.16	260.0	177.1	450.0	414.4	640.0	715.3
75.00	25.78	265.0	182.4	455.0	421.5	645.0	724.0
80.00	28.49	270.0	187.7	460.0	428.7	650.0	732.7
85.00	31.30	275.0	193.1	465.0	436.0	655.0	741.5
90.00	34.20	280.0	198.6	470.0	443.3	660.0	750.2
95.00	37.19	285.0	204.1	475.0	450.6	665.0	759.1
100.0	40.26	290.0	209.7	480.0	458.0	670.0	767.9
105.0	43.43	295.0	215.3	485.0	465.4	675.0	776.8
110.0	46.67	300.0	221.0	490.0	472.8	680.0	785.8
115.0	50.00	305.0	226.8	495.0	480.3	685.0	794.8
120.0	53.41	310.0	232.6	500.0	487.9	690.0	803.8
125.0	56.90	315.0	238.4	505.0	495.5	695.0	812.8
130.0	60.47	320.0	244.3	510.0	503.1	700.0	821.9
135.0	64.11	325.0	250.2	515.0	510.8	705.0	831.0
140.0	67.83	330.0	256.2	520.0	518.5	710.0	840.2
145.0	71.62	335.0	262.3	525.0	526.2	715.0	849.3
150.0	75.48	340.0	268.4	530.0	534.0	720.0	858.6
155.0	79.42	345.0	274.5	535.0	541.8	725.0	867.8
160.0	83.43	350.0	280.7	540.0	549.7	730.0	877.1
165.0	87.50	355.0	286.9	545.0	557.6	735.0	886.5
170.0	91.64	360.0	293.2	550.0	565.6	740.0	895.8
175.0	95.86	365.0	299.5	555.0	573.5	745.0	905.2
180.0	100.1	370.0	305.9	560.0	581.6	750.0	914.7
185.0	104.5	375.0	312.4	565.0	589.6		
190.0	108.9	380.0	318.8	570.0	597.7		

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4 Instrument Verification

See the following pages of reports for individual equipment.

4.1 FIT- 310 Septage Inlet Grinder

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 53 W DN100	1.2931 - 1.2931
Device type	K-Factor
E309B116000	6
Serial number	Zero point
V2.03.00	V1.05.03
Software Version Transmitter	Software Version I/O-Module
01/28/2020	10:44 AM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.53 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 53 W DN100	K-Factor	1.2931 - 1.2931
Serial number	E309B116000	Zero point	6
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	10:44 AM

Verification Flow end value (100 %): 4633.180 m3/d
Flow speed 6.83 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	231.659 m3/d (5%)	1.09 %	-0.54 %
✓		463.318 m3/d (10.0%)	0.79 %	-0.14 %
✓		2316.590 m3/d (50.0%)	0.56 %	-0.08 %
✓		4633.180 m3/d (100%)	0.53 %	-0.08 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.017 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.006 mA
✓		20.000 mA (100%)	0.05 mA	0.004 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	7.890 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	0.000 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 53 W DN100	K-Factor	1.2931 - 1.2931
Serial number	E309B116000	Zero point	6
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	10:44 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	3270.60 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.004 m3/P	Passive/Negative	20.00 ms		

Actual System Ident. 127.0

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4.2 FIT- 350 Septage Tank

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant
	FIT350
Order code	Tag Name
PROMAG 53 P DN100	1.2918 - 1.2918
Device type	K-Factor
E60E6616000	2
Serial number	Zero point
V2.03.00	V1.05.03
Software Version Transmitter	Software Version I/O-Module
01/28/2020	10:59 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT350
Device type	PROMAG 53 P DN100	K-Factor	1.2918 - 1.2918
Serial number	E60E6616000	Zero point	2
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	10:59 AM

Verification Flow end value (100 %): 2714.336 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	135.717 m3/d (5%)	1.50 %	-0.43 %
✓		271.434 m3/d (10.0%)	1.00 %	-0.43 %
✓		1357.168 m3/d (50.0%)	0.60 %	-0.07 %
✓		2714.336 m3/d (100%)	0.55 %	-0.01 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.007 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.019 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.014 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.257 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	3.272 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT350
Device type	PROMAG 53 P DN100	K-Factor	1.2918 - 1.2918
Serial number	E60E6616000	Zero point	2
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	10:59 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	4320.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.008 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 123.0

4.3 FIT- 611 R.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant
	FIT-611
Order code	Tag Name
PROMAG 10 P DN150	1.0042 - 1.0042
Device type	K-Factor
E6085316000	0
Serial number	Zero point
V1.03.00	
Software Version Transmitter	Software Version I/O-Module
01/28/2020	12:37 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-611
Device type	PROMAG 10 P DN150	K-Factor	1.0042 - 1.0042
Serial number	E6085316000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	12:37 PM

Verification Flow end value (100 %): 6107.256 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	305.363 m3/d (5%)	1.60 %	-0.86 %
✓		610.726 m3/d (10.0%)	1.10 %	-0.64 %
✓		3053.628 m3/d (50.0%)	0.70 %	-0.12 %
✓		6107.256 m3/d (100%)	0.65 %	-0.06 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.003 mA
✓		12.000 mA (50.0%)	0.05 mA	0.008 mA
✓		20.000 mA (100%)	0.05 mA	0.035 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	83.300 ms	20.000..83.300 ms	66.711 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	FIT-611	
Device type	PROMAG 10 P DN150	K-Factor	1.0042 - 1.0042	
Serial number	E6085316000	Zero point	0	
Software Version Transmitter	V1.03.00	Software Version I/O-Module		
Verification date	01/28/2020	Verification time	12:37 PM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	5000.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.025 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.4 FIT- 612 W.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-612
Order code: PROMAG 10 P DN80	Tag Name: 1.0337 - 1.0337
Device type: E6086D16000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 03:16 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.63 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-612
Device type	PROMAG 10 P DN80	K-Factor	1.0337 - 1.0337
Serial number	E608GD16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:16 PM

Verification Flow end value (100 %): 2856.000 m3/d
Flow speed 6.58 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	142.800 m3/d (5%)	1.21 %	-0.51 %
✓		285.600 m3/d (10.0%)	0.90 %	-0.06 %
✓		1428.000 m3/d (50.0%)	0.66 %	0.00 %
✓		2856.000 m3/d (100%)	0.63 %	-0.07 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.003 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.007 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.007 mA
✓		20.000 mA (100%)	0.05 mA	0.013 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	50.000 ms	13.340..50.000 ms	43.203 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	FIT-612	
Device type	PROMAG 10 P DN80	K-Factor	1.0337 - 1.0337	
Serial number	E608GD16000	Zero point	0	
Software Version Transmitter	V1.03.00	Software Version I/O-Module		
Verification date	01/28/2020	Verification time	03:16 PM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	864.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.005 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

4.5 FIT- 631 R.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-631
Order code: PROMAG 10 P DN150	Tag Name: 1.016 - 1.016
Device type: E608FE16000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 03:27 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-631
Device type	PROMAG 10 P DN150	K-Factor	1.016 - 1.016
Serial number	E608FE16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:27 PM

Verification Flow end value (100 %): 6107.256 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	305.363 m3/d (5%)	1.60 %	-0.63 %
✓		610.726 m3/d (10.0%)	1.10 %	-0.29 %
✓		3053.628 m3/d (50.0%)	0.70 %	-0.11 %
✓		6107.256 m3/d (100%)	0.65 %	-0.08 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.001 mA
✓		4.800 mA (5%)	0.05 mA	-0.008 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.008 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.007 mA
✓		20.000 mA (100%)	0.05 mA	0.012 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	83.300 ms	20.000..83.300 ms	66.659 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	FIT-631	
Device type	PROMAG 10 P DN150	K-Factor	1.016 - 1.016	
Serial number	E608FE16000	Zero point	0	
Software Version Transmitter	V1.03.00	Software Version I/O-Module		
Verification date	01/28/2020	Verification time	03:27 PM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	5000.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.025 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.6 FIT- 621 R.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-621
Order code: PROMAG 10 P DN150	Tag Name: 1.0176 - 1.0176
Device type: E6087E16000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 03:37 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-621
Device type	PROMAG 10 P DN150	K-Factor	1.0176 - 1.0176
Serial number	E6087E16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:37 PM

Verification Flow end value (100 %): 6107.256 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	305.363 m3/d (5%)	1.60 %	-0.28 %
✓		610.726 m3/d (10.0%)	1.10 %	0.02 %
✓		3053.628 m3/d (50.0%)	0.70 %	-0.12 %
✓		6107.256 m3/d (100%)	0.65 %	-0.03 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.002 mA
✓		4.800 mA (5%)	0.05 mA	-0.009 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.010 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.010 mA
✓		20.000 mA (100%)	0.05 mA	0.008 mA
–	Pulse Output 1	—	—	—
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	83.300 ms	20.000..83.300 ms	66.529 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

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FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-621
Device type	PROMAG 10 P DN150	K-Factor	1.0176 - 1.0176
Serial number	E6087E16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:37 PM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	5000.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.025 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.7 FIT- 622 W.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-622
Order code: PROMAG 10 P DN80	Tag Name: 1.0288 - 1.0288
Device type: E608FC16000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 03:46 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223 Production number	8784351 Production number
1.07.08 Software Version	1.00.01 Software Version
03/2019 Last Calibration Date	03/2019 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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-622
Device type	PROMAG 10 P DN80	K-Factor	1.0288 - 1.0288
Serial number	E608FC16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:46 PM

Verification Flow end value (100 %): 1737.175 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	86.859 m3/d (5%)	1.60 %	-0.82 %
✓		173.717 m3/d (10.0%)	1.10 %	-0.14 %
✓		868.588 m3/d (50.0%)	0.70 %	-0.04 %
✓		1737.175 m3/d (100%)	0.65 %	-0.02 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.001 mA
✓		4.800 mA (5%)	0.05 mA	-0.004 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.003 mA
✓		12.000 mA (50.0%)	0.05 mA	0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.031 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	50.000 ms	13.340..50.000 ms	43.125 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-622
Device type	PROMAG 10 P DN80	K-Factor	1.0288 - 1.0288
Serial number	E608FC16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	03:46 PM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	864.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.005 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

4.8 FIT- 632 W.A.S.

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-632
Order code: PROMAG 10 P DN80	Tag Name: 1.055 - 1.055
Device type: E6088416000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 04:01 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-632
Device type	PROMAG 10 P DN80	K-Factor	1.055 - 1.055
Serial number	E6088416000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	04:01 PM

Verification Flow end value (100 %): 1737.175 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	86.859 m3/d (5%)	1.60 %	-0.29 %
✓		173.717 m3/d (10.0%)	1.10 %	-0.21 %
✓		868.588 m3/d (50.0%)	0.70 %	-0.06 %
✓		1737.175 m3/d (100%)	0.65 %	0.00 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA (5%)	0.05 mA	-0.006 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.006 mA
✓		12.000 mA (50.0%)	0.05 mA	0.002 mA
✓		20.000 mA (100%)	0.05 mA	0.026 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	50.000 ms	13.340..50.000 ms	43.281 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	FIT-632	
Device type	PROMAG 10 P DN80	K-Factor	1.055 - 1.055	
Serial number	E6088416000	Zero point	0	
Software Version Transmitter	V1.03.00	Software Version I/O-Module		
Verification date	01/28/2020	Verification time	04:01 PM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	864.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.005 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

4.9 FIT- 750 Filtrate Tank

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant: FIT-750
Order code: PROMAG 10 P DN80	Tag Name: 1.1234 - 1.1234
Device type: E6086E16000	K-Factor: 0
Serial number: V1.03.00	Zero point
Software Version Transmitter: 01/28/2020	Software Version I/O-Module: 12:27 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223 Production number	8784351 Production number
1.07.08 Software Version	1.00.01 Software Version
03/2019 Last Calibration Date	03/2019 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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-750
Device type	PROMAG 10 P DN80	K-Factor	1.1234 - 1.1234
Serial number	E6086E16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	12:27 PM

Verification Flow end value (100 %): 1737.175 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	86.859 m3/d (5%)	1.60 %	-0.46 %
✓		173.717 m3/d (10.0%)	1.10 %	-0.84 %
✓		868.588 m3/d (50.0%)	0.70 %	-0.14 %
✓		1737.175 m3/d (100%)	0.65 %	-0.05 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.004 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.003 mA
✓		12.000 mA (50.0%)	0.05 mA	0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.030 mA
–	Pulse Output 1	—	—	—
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	50.000 ms	13.340..50.000 ms	43.828 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	FIT-750	
Device type	PROMAG 10 P DN80	K-Factor	1.1234 - 1.1234	
Serial number	E6086E16000	Zero point	0	
Software Version Transmitter	V1.03.00	Software Version I/O-Module		
Verification date	01/28/2020	Verification time	12:27 PM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	4320.00 m3/d		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.005 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.10 FIT- 1091 Service Water

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant
	FIT-1091
Order code	Tag Name
PROMAG 10 P DN150	1.0062 - 1.0062
Device type	K-Factor
E608FD16000	0
Serial number	Zero point
V1.03.00	
Software Version Transmitter	Software Version I/O-Module
01/28/2020	12:15 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-1091
Device type	PROMAG 10 P DN150	K-Factor	1.0062 - 1.0062
Serial number	E608FD16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	12:15 PM

Verification Flow end value (100 %): 70.686 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	3.534 l/s (5%)	1.60 %	-1.47 %
✓		7.069 l/s (10.0%)	1.10 %	0.36 %
✓		35.343 l/s (50.0%)	0.70 %	-0.07 %
✓		70.686 l/s (100%)	0.65 %	-0.03 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.005 mA
✓		12.000 mA (50.0%)	0.05 mA	0.002 mA
✓		20.000 mA (100%)	0.05 mA	0.025 mA
–	Pulse Output 1	—	—	—
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	83.300 ms	20.000..83.300 ms	66.425 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-1091
Device type	PROMAG 10 P DN150	K-Factor	1.0062 - 1.0062
Serial number	E608FD16000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/28/2020	Verification time	12:15 PM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	50.00 l/s		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.025 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.11 FIT- 405 Attenuation

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant
	FIT-405
Order code	Tag Name
PROMAG 53 P DN200	1.0223 - 1.0223
Device type	K-Factor
E6088316000	11
Serial number	Zero point
V2.03.00	V1.05.03
Software Version Transmitter	Software Version I/O-Module
01/28/2020	11:09 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-405
Device type	PROMAG 53 P DN200	K-Factor	1.0223 - 1.0223
Serial number	E6088316000	Zero point	11
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	11:09 AM

Verification Flow end value (100 %): 125.664 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	6.283 l/s (5%)	1.50 %	-0.46 %
✓		12.566 l/s (10.0%)	1.00 %	-0.12 %
✓		62.832 l/s (50.0%)	0.60 %	-0.09 %
✓		125.664 l/s (100%)	0.55 %	-0.01 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.007 mA
✓		4.800 mA (5%)	0.05 mA	-0.006 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.021 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.004 mA
✓		20.000 mA (100%)	0.05 mA	0.012 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	13.300 ms	0.000..27.625 ms	18.288 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	3.269 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-405
Device type	PROMAG 53 P DN200	K-Factor	1.0223 - 1.0223
Serial number	E6088316000	Zero point	11
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.05.03
Verification date	01/28/2020	Verification time	11:09 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	150.00 l/s		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	37.854 l/P	Passive/Positive	100.00 ms		

Actual System Ident. 123.0

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4.12 FIT- 946 Fournier Press #1 Polymer Flow

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 50 P DN25	0.8218 - 0.8218
Device type	K-Factor
DA084316000	7
Serial number	Zero point
V2.03.00	V1.04.02
Software Version Transmitter	Software Version I/O-Module
01/28/2020	11:36 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 P DN25	K-Factor	0.8218 - 0.8218
Serial number	DA084316000	Zero point	7
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	01/28/2020	Verification time	11:36 AM

Verification Flow end value (100 %): 7068.583 l/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	353.429 l/h (5%)	1.50 %	-0.39 %
✓		706.858 l/h (10.0%)	1.00 %	-0.05 %
✓		3534.292 l/h (50.0%)	0.60 %	0.01 %
✓		7068.583 l/h (100%)	0.55 %	0.02 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.019 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.001 mA
✓		20.000 mA (100%)	0.05 mA	0.019 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	2.400 ms	0.000..8.750 ms	3.589 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	3.268 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 P DN25	K-Factor	0.8218 - 0.8218
Serial number	DA084316000	Zero point	7
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	01/28/2020	Verification time	11:36 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/h	4088.24 l/h		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.757 l/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

4.13 FIT- 940 Fournier Press #1 Sludge Flow

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 50 W DN80	0.9282 - 0.9282
Device type	K-Factor
D2012116000	4
Serial number	Zero point
V2.03.00	V1.04.01
Software Version Transmitter	Software Version I/O-Module
01/28/2020	11:26 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 W DN80	K-Factor	0.9282 - 0.9282
Serial number	D2012116000	Zero point	4
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.01
Verification date	01/28/2020	Verification time	11:26 AM

Verification Flow end value (100 %): 72.382 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	3.619 m3/h (5%)	1.50 %	-0.36 %
✓		7.238 m3/h (10.0%)	1.00 %	-0.04 %
✓		36.191 m3/h (50.0%)	0.60 %	-0.04 %
✓		72.382 m3/h (100%)	0.55 %	0.02 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.008 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.022 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.016 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	4.200 ms	0.000..12.650 ms	5.342 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	0.000 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant		
Order code		Tag Name	———	
Device type	PROMAG 50 W DN80	K-Factor	0.9282 - 0.9282	
Serial number	D2012116000	Zero point	4	
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.01	
Verification date	01/28/2020	Verification time	11:26 AM	

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/h	45.42 m3/h		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.008 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

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4.14 FIT- 956 Fournier Press # 2 Polymer Flow

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 50 P DN25	0.8082 - 0.8082
Device type	K-Factor
DA084616000	16
Serial number	Zero point
V2.03.00	V1.04.02
Software Version Transmitter	Software Version I/O-Module
01/28/2020	11:55 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 P DN25	K-Factor	0.8082 - 0.8082
Serial number	DA084616000	Zero point	16
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	01/28/2020	Verification time	11:55 AM

Verification Flow end value (100 %): 7068.583 l/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	353.429 l/h (5%)	1.50 %	-0.41 %
✓		706.858 l/h (10.0%)	1.00 %	-0.06 %
✓		3534.292 l/h (50.0%)	0.60 %	0.03 %
✓		7068.583 l/h (100%)	0.55 %	0.03 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.006 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.022 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.002 mA
✓		20.000 mA (100%)	0.05 mA	0.016 mA
–	Pulse Output 1	—	—	—
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	2.400 ms	0.000..8.750 ms	3.649 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	6.531 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 P DN25	K-Factor	0.8082 - 0.8082
Serial number	DA084616000	Zero point	16
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	01/28/2020	Verification time	11:55 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/h	4088.24 l/h		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.757 l/P	Passive/Positive	100.00 ms		

Actual System Ident. 123.0

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4.15 FIT – 950 Fournier Press #2 Sludge Flow

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 50 W DN80	1.0487 - 1.0487
Device type	K-Factor
D4010116000	0
Serial number	Zero point
V2.03.00	V1.04.01
Software Version Transmitter	Software Version I/O-Module
01/28/2020	11:46 AM
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
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 W DN80	K-Factor	1.0487 - 1.0487
Serial number	D4010116000	Zero point	0
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.01
Verification date	01/28/2020	Verification time	11:46 AM

Verification Flow end value (100 %): 72.382 m3/h
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	3.619 m3/h (5%)	1.50 %	-0.49 %
✓		7.238 m3/h (10.0%)	1.00 %	0.02 %
✓		36.191 m3/h (50.0%)	0.60 %	0.01 %
✓		72.382 m3/h (100%)	0.55 %	0.08 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.007 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.019 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.015 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	4.200 ms	0.000..12.650 ms	4.891 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	3.268 mV

Legend of symbols

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

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 50 W DN80	K-Factor	1.0487 - 1.0487
Serial number	D4010116000	Zero point	0
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.01
Verification date	01/28/2020	Verification time	11:46 AM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/h	45.42 m3/h		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.008 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 121.0

CapitalControls
Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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4.16 FIT 470 Raw Sewage Vortex #1

FIELD EQUIPMENT VERIFICATION / CALIBRATION

DATE: **January 28 / 2020**

DESCRIPTION : **Vortex #1**	MODEL: Multiranger 200	TAG:**FIT-470**
MANUFACTURER : **Siemens**	Serial # PBD/B5180380	

Client Name: **Almonte WWTP** Device Output Signal : **4-20 mA**

INSTALLATION INSPECTION

	DESCRIPTION	FINDINGS				COMMENTS
		OK	FIXED	N/A	FAULTY	
	GENERAL					**12" Parshall flume**
1	TAGGING			X		**P001 = 6 OCM**
2						**P002= 1**
	MECHANICAL					**P003= 3**
3	MOUNTING: check for proper fastening, etc.	X				**P004= 112 transducer**
4	ORIENTATION: check for proper angle, etc.)	X				**P005=1 meters**
5	POSITION: relative position to other components (i.e. for proper flow, blanking distance), etc.	X				**P006= 1.095m empty distance**
6						**P007= .765 m span**
	ELECTRICAL					**P601= 1.522**
7		X				**P603= .762**
8	WIRE TAGGING: (exists and proper wire type)	X				**P604= 39984 m3/day**
9	QUALITY OF CONNECTIONS:	X				**P605= 0.001m**
10	GROUNDING:	X				**P606= 4**
11	SHIELDING: (check if grounded only at PLC end of wire)	X				**P607= 0**
12	CERTIFICATION CSA, ULC:	X				
13						

SET-UP/CALIBRATION

DIGITAL			ADJUSTMENT USING	VERIFIED USING	SETPOINT / RANGE
14	SETPOINT ADJUSTMENT	MECHANICAL TYPE		**Level Stand**	
		ELECTRONIC TYPE	**Fluke 725 calibrator S/N 8759025**		**4 - 20 mA = 39984 m3/day**

Configuration Parameters:

Calibration Data Test **Tolerance: 5.00%**

	Measured Level	Display	Calculated	% Error	Status	Notes
	0.000 m	**0 m3/day**	**0 m3/day**	**0.00%**	**Passed**	
	0.072 m	**1178 m3/day**	**1032 m3/day**	**0.37%**	**Passed**	
	0.205 m	**5280 m3/day**	**5029 m3/day**	**0.63%**	**Passed**	

Error (% Full Scale) = ((Displayed Output - Calculated Variable) / Full Scale) * 100
= ((5280-5029) / 39984)*100
= 0.63 % of full scale

Checked By: *Tim Stewart*
Cell: 613-325-9213
Email: tim.stewart@capitalcontrols.ca

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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4.17 FIT- 480 Raw sewage Vortex #2

FIELD EQUIPMENT VERIFICATION / CALIBRATION

DATE: **January 28 / 2020**

DESCRIPTION : **Vortex #2**	MODEL: Multiranger 200	TAG:**FIT-480**
MANUFACTURER : **Siemens**	Serial # PBD/B5180395	

Client Name: **Almonte WWTP** Device Output Signal : **4-20 mA**

INSTALLATION INSPECTION

	DESCRIPTION	FINDINGS				COMMENTS
		OK	FIXED	N/A	FAULTY	
	GENERAL					**12" Parshall flume**
1	TAGGING			X		**P001= 6 OCM**
2						**P002= 1**
	MECHANICAL					**P003= 3**
3	MOUNTING: check for proper fastening, etc.	X				**P004= 112 transducer**
4	ORIENTATION: check for proper angle, etc.)	X				**P005= 1 meters**
5	POSITION: relative position to other components (i.e. for proper flow, blanking distance), etc.	X				**P006= 1.095m empty distance**
6						**P007= .765m span**
	ELECTRICAL					**P601= 1.522**
7		X				**P603= .765m**
8	WIRE TAGGING: (exists and proper wire type)	X				**P604 39984**
9	QUALITY OF CONNECTIONS:	X				**P605= 0.001m**
10	GROUNDING:	X				**P606=4**
11	SHIELDING: (check if grounded only at PLC end of wire)	X				**P607=0**
12	CERTIFICATION CSA, ULC:	X				
13						

SET-UP/CALIBRATION

DIGITAL			ADJUSTMENT USING	VERIFIED USING	SETPOINT / RANGE
14	SETPOINT ADJUSTMENT	MECHANICAL TYPE		**Level Stand**	
		ELECTRONIC TYPE	**Fluke 725 calibrator S/N 8759025**		**4 - 20 mA = 39984 m3/day**

Configuration Parameters:

Calibration Data Test **Tolerance: 5.00%**

	Measured Level	Display	Calculated	% Error	Status	Notes
	0.000 m	**0 m3/day**	**0 m3/day**	**0.00%**	**Passed**	
	0.070 m	**1026 m3/day**	**988 m3/day**	**0.09%**	**Passed**	
	0.205 m	**5460 m3/day**	**5029 m3/day**	**1.1%**	**Passed**	

Error (% Full Scale) = ((Displayed Output - Calculated Variable) / Full Scale) * 100
= ((5460-5029) / 39984)*100
= 1.1 % of full scale

Checked By: *Tim Stewart*
Cell: 613-325-9213
Email: tim.stewart@capitalcontrols.ca

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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4.18 FIT-01 White Tail Ridge Pumping Station

DTM Version: 3.29.00 Page 1/3

Flowmeter Verification Certificate Transmitter

Customer	Plant

Order code	Tag Name
PROMAG 10 ? DN80	1.0161 - 1.0161
Device type	K-Factor
DC068219000	0
Serial number	Zero point
V1.03.00	
Software Version Transmitter	Software Version I/O-Module
01/29/2020	12:55 PM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.65 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.08	1.00.01
Software Version	Software Version
03/2019	03/2019
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.

Endress+Hauser

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FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 10 ? DN80	K-Factor	1.0161 - 1.0161
Serial number	DC068219000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/29/2020	Verification time	12:55 PM

Verification Flow end value (100 %): 20.106 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	1.005 l/s (5%)	1.60 %	-0.65 %
✓		2.011 l/s (10.0%)	1.10 %	0.03 %
✓		10.053 l/s (50.0%)	0.70 %	-0.14 %
✓		20.106 l/s (100%)	0.65 %	-0.04 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.009 mA
✓		4.800 mA (5%)	0.05 mA	-0.015 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.015 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.009 mA
✓		20.000 mA (100%)	0.05 mA	0.023 mA
–	Pulse Output 1	—	—	—
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	50.000 ms	13.333..50.000 ms	43.151 ms
✓	Coil Curr. Stability		—	—

Legend of symbols

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

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FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	———
Device type	PROMAG 10 ? DN80	K-Factor	1.0161 - 1.0161
Serial number	DC068219000	Zero point	0
Software Version Transmitter	V1.03.00	Software Version I/O-Module	
Verification date	01/29/2020	Verification time	12:55 PM

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	10.00 l/s		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	0.001 m3/P	Passive/Positive	100.00 ms		

Actual System Ident. 115.0

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4.19 FIT 700 Sludge Flow

FIELD EQUIPMENT VERIFICATION / CALIBRATION

DATE: **January 29 / 2020**

DESCRIPTION : **Flow**	MODEL: 8712ESR1A1N0NM4	TAG:**FIT-700**
MANUFACTURER : **Rosemount**	Serial # 0318926	

Client Name: **Almonte WWTP** Device Output Signal : **4-20 mA**

INSTALLATION INSPECTION

	DESCRIPTION	FINDINGS				COMMENTS
		OK	FIXED	N/A	FAULTY	
	GENERAL					
1	TAGGING			X		**Coil Resistance = 12.2 ohms**
2						**Resistance to ground = infinity**
	MECHANICAL					
3	MOUNTING: check for proper fastening, etc.	X				
4	ORIENTATION: check for proper angle, etc.)	X				
5	POSITION: relative position to other components (i.e. for proper flow, blanking distance), etc.	X				
6						
	ELECTRICAL					
7		X				
8	WIRE TAGGING: (exists and proper wire type)	X				
9	QUALITY OF CONNECTIONS:	X				
10	GROUNDING:	X				
11	SHIELDING: (check if grounded only at PLC end of wire)	X				
12	CERTIFICATION CSA, ULC:	X				
13						

SET-UP/CALIBRATION

	DIGITAL		ADJUSTMENT USING	VERIFIED USING	SETPOINT / RANGE
14	SETPOINT ADJUSTMENT	MECHANICAL TYPE			
		ELECTRONIC TYPE	**Fluke 725 calibrator S/N 8759025**		**4 - 20 mA = 2617 l/min**

Configuration Parameters:

Calibration Data Test **Tolerance: 5.00%**

		Display	Calculated	% Error	Status	Notes
	Measured Current					
	4.00 mA	**0 l/min**	**0 l/min**	**0.00%**	**Passed**	
	5.44 mA	**234 l/min**	**235.5 l/min**	**0.06%**	**Passed**	
	5.95 mA	**318 l/min**	**319.1 l/min**	**0.04%**	**Passed**	

Error (% Full Scale) = ((Displayed Output - Calculated Variable) / Full Scale) * 100
= ((318-319.1) / 2617)*100
= 0.04 % of full scale

Checked By: *Tim Stewart*
Cell: 613-325-9213
Email: tim.stewart@capitalcontrols.ca

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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4.20 FIT-01 Final Effluent

FIELD EQUIPMENT VERIFICATION / CALIBRATION

DATE: **January 28 / 2020**

DESCRIPTION : **Final Effluent**	MODEL: OCM III	TAG:**FIT-01**
MANUFACTURER : **Siemens**	Serial # PBD	

Client Name: **Almonte WWTP** Device Output Signal : **4-20 mA**

INSTALLATION INSPECTION

	DESCRIPTION	FINDINGS				COMMENTS
		OK	FIXED	N/A	FAULTY	
	GENERAL					**12" Parshall flume**
1	TAGGING			**X**		**Flow at max height = 21554.5 m3/day**
2						**Max Height = 51.2 cm**
	MECHANICAL					**Ratiometric**
3	MOUNTING: check for proper fastening, etc.	**X**				**U0=1.522**
4	ORIENTATION: check for proper angle, etc.)	**X**				**Range at zero head = 97.5 cm**
5	POSITION: relative position to other components (i.e. for proper flow, blanking distance), etc.	**X**				
6						
	ELECTRICAL					
7		**X**				
8	WIRE TAGGING: (exists and proper wire type)	**X**				
9	QUALITY OF CONNECTIONS:	**X**				
10	GROUNDING:	**X**				
11	SHIELDING: (check if grounded only at PLC end of wire)	**X**				
12	CERTIFICATION CSA, ULC:	**X**				
13						

SET-UP/CALIBRATION

DIGITAL			ADJUSTMENT USING	VERIFIED USING	SETPOINT / RANGE
14	SETPOINT ADJUSTMENT	MECHANICAL TYPE		**Measuring Tape**	
		ELECTRONIC TYPE	**Fluke 725 calibrator S/N 8759025**		**4 - 20 mA = 21554.5 m3/day**

Configuration Parameters:

Calibration Data Test **Tolerance: 5.00%**

		Display	Calculated	% Error	Status	Notes
	Measured Level					
	0.087 m	**1360 m3/day**	**1274 m3/day**	**0.40%**	**Passed**	
	0.129 m	**2691 m3/day**	**2544 m3/day**	**0.68%**	**Passed**	
	0.131 m	**2740 m3/day**	**2610 m3/day**	**0.60%**	**Passed**	

Error (% Full Scale) = ((Displayed Output - Calculated Variable) / Full Scale) * 100
= ((2740-2610) / 21554.5)*100
= 0.60 % of full scale

Checked By: *Tim Stewart*
Cell: 613-325-9213
Email: tim.stewart@capitalcontrols.ca

Instruments used during verification are Traceable to NIST standards. See Appendix for Calibration Reports

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Appendix A- Equipment Calibration Certificates

PYLON www.pylonelectronics.com

Pylon Electronics Inc.
147 Colonnade Road
Ottawa, ON K2E 7L9

Page 1 of 1

CERTIFICATE OF CALIBRATION

Description	MULTI FUNCTION PROCESS	**Work Order**	H75881
Model Number	725	**Serial Number**	8759025
Instrument Id	N/A	**Cal Procedure**	667581
Manufacturer	FLUKE	**Cal Date**	5 Jun 2019
Customer Name	CAPITAL CONTROLS	**Recall Cycle**	52 Weeks
Purchase Order	CCISHOP-161	**Next Cal Date**	5 Jun 2020

Calibration Environment: Temperature 23.5 °C Relative Humidity 35.5 %RH

Received Condition: Within Tolerance

Completed Condition: Within Tolerance

Standards Used to Establish Traceability

Instrument Type	Model	Asset #	Cal Due Date
CALIBRATOR WITH SCOPE OPTION	5522A-SC1100	1144357	1 Mar 2020
MULTIMETER	34401A	240-120	31 Jan 2020

Pylon certifies that, at the time of calibration, the above listed instrument meets or exceeds all of the specifications defined on the Test Data Sheet (TDS), unless otherwise indicated. The Certificate received and completed conditions and the TDS specifications are based on the procedure(s) and/or specification(s) referenced on the TDS unless otherwise indicated. Any statement of compliance is made without taking measurement uncertainty into account and is based on the instrument's performance against the test limits documented on the test data sheet.

The above listed instrument has been calibrated using standards that are traceable to the International System of Units (SI) through a National Metrological Institute (such as NRC or NIST). Pylon's quality system meets the requirements of ISO/IEC 17025:2005. Unless otherwise specified, Pylon maintains a minimum of a 4:1 ratio between the equipment under test and the measurement system.

Test data As Found and Final (as left) results are the same unless reported otherwise. Certificate remarks identify if adjustments were performed.

pylcert1

Metrologist: *165* Quality Assurance: *301* Date of Issue: 5 Jun 2019 F083 Rev 15

HALIFAX MONTREAL OTTAWA TORONTO EDMONTON CALGARY

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PYLON

Calibration Test Data

Description: MULTI FUNCTION PROCESS CALIBI Work order: H75881
Model: 725 Serial: 8759025
Customer ID.: N/A Procedure: 667581
Manufacturer: FLUKE Proc. Rev.: 01-Apr-2014 Rev:05May2007
Customer: CAPITAL CONTROLS Cal Date: 05-Jun-2019 AF=0
\\ott02\Company Data\TDS\Elec TDS\725 Fluke.xls Temp 151 Appr 062 07-Sep-2016 F=0

TEST REF.	TEST DESCRIPTION	RESULTS MIN	AS FOUND	FINAL	MAX
P. 25	**UPPER DISPLAY VOLTAGE MEASUREMENT TESTS**				
	APPLIED (V)	V	V		V
	0	-0.002	0.000		0.002
	15	14.995	15.001		15.005
	30	29.992	30.002		30.008
P.26	**LOWER DISPLAY mV/TC MEASUREMENT TESTS**				
	APPLIED (V)	V	V	V	V
	0.00 m	-0.02 m	0.00 m		0.02 m
	45.00 m	44.97 m	44.99 m		45.03 m
	90.00 m	89.96 m	89.99 m		90.04 m
P. 27	**LOWER DISPLAY VOLTAGE MEASUREMENT TESTS**				
	APPLIED (V)	V	V	V	V
	0.000	-0.002	0.000		0.002
	10.000	9.996	9.999		10.004
	20.000	19.994	19.999		20.006
			3.999		
P. 28	**UPPER DISPLAY mA MEASUREMENT TESTS**				
	APPLIED (A)	A	A	A	A
	4.000 m	3.997 m	3.999 m		4.003 m
	12.000 m	11.995 m	12.000 m		12.005 m
	24.000 m	23.993 m	24.003 m		24.007 m

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PYLON

Calibration Test Data

Description: **MULTI FUNCTION PROCESS CALIBI** Work order: **H75881**
Model: **725** Serial: **8759025**

TEST REF.	TEST DESCRIPTION	RESULTS MIN	AS FOUND	FINAL	MAX
P. 29	**LOWER DISPLAY mA MEASUREMENT TESTS**				
	APPLIED (A)	A	A	A	A
	4.000 m	3.997 m	4.000 m		4.003 m
	12.000 m	11.995 m	12.001 m		12.005 m
	24.000 m	23.993 m	24.001 m		24.007 m
P. 30	**LOWER DISPLAY FREQUENCY MEASUREMENT TESTS**				
	APPLIED FRQ (Hz)	Hz	Hz	Hz	Hz
	1 V P-P SQ 10 k	9.98 k	10.00 k		10.02 k
P. 31	**LOWER DISPLAY FREQUENCY SOURCE TEST**				
	TI OUTPUT (Hz)	Hz	Hz	Hz	Hz
	10 k	9.975 k	10.000 k		10.025 k
P. 32	**LOWER DISPLAY 4-W RESISTANCE MEASUREMENT TESTS**				
	APPLIED (Ω)	Ω	Ω	Ω	Ω
	15	14.90	14.99		15.10
	350	349.90	349.99		350.10
	500	499.5	499.9		500.5
	1500	1499.5	1499.9		1500.5
	3200	3199.0	3199.8		3201.0
P. 33	**LOWER DISPLAY 3-WIRE RTD MEASUREMENT TESTS**				
	APPLIED (Ω)	Ω	Ω	Ω	Ω
	350	349.80	349.94		350.20

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PYLON

Calibration Test Data

Description: **MULTI FUNCTION PROCESS CALIBI** Work order: **H75881**
Model: **725** Serial: **8759025**

TEST REF.	TEST DESCRIPTION	RESULTS MIN	AS FOUND	FINAL	MAX
P. 34	**LOWER DISPLAY T/C MEASUREMENT TESTS**				
	APPLIED (°C) (V)	°C	°C	°C	°C
	0 0.000 m	-0.7	-0.1		0.7
P. 35	**LOWER DISPLAY T/C SOURCE TEST**				
	APPLIED (°C)	°C	°C	°C	°C
	0	-0.7	0.0		0.7
P. 36	**LOWER DISPLAY mA SOURCE TESTS**				
	OUTPUT (A)	A	A	A	A
	4 m	3.9972 m	3.9992 m		4.0028 m
	12 m	11.9956 m	11.9986 m		12.0044 m
	24 m	23.9932 m	23.9969 m		24.0068 m
P. 37	**LOWER DISPLAY mV SOURCE TESTS**				
	OUTPUT (V)	V	V	V	V
	0.00 m	-0.020 m	-0.002 m		0.020 m
	45.00 m	44.970 m	45.001 m		45.030 m
	100.00 m	99.960 m	100.004 m		100.040 m
	LOWER DISPLAY VOLTAGE SOURCE TESTS				
	OUTPUT (V)	V	V	V	V
	0.000	-0.002	0.000		0.002
	5.000	4.9970	5.0000		5.0030
	10.000	9.9960	10.0001		10.0040

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PYLON

Calibration Test Data

Description: **MULTI FUNCTION PROCESS CALIBI** Work order: **H75881**
Model: **725** Serial: **8759025**

	TEST DESCRIPTION	RESULTS MIN	AS FOUND	FINAL	MAX
P. 38	**LOWER DISPLAY RESISTANCE SOURCE TESTS**				
	OUTPUT (Ω)	Ω	Ω	Ω	Ω
	15	14.9	15.0		15.1
	360	359.9	360.0		360.1
	500	499.5	499.8		500.5
	1500	1499.5	1500.2		1500.5
	3200	3199.0	3200.2		3201.0
P. 39	**PRESSURE MODULE INPUT**				
	(WITH 700 SERIES PRESSURE MODULE)				
	TI DISPLAY SHOWS (PSI)	Pass / Fail	n/a		

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Calibration Certificate
Kalibrations-Zertifikat

FieldCheck

Page 1 of 2
Seite 1 of 2

Production Number Fabrikationsnummer	240223
Serial Number Seriennummer	990B1402000
Manufacturer Hersteller	Endress+Hauser Flowtec AG CH-4153 Reinach

Date Of Calibration Kalibrierdatum	03/13/2019
Location Ort	DG-Greenwood
Testing Instruction Prüfanweisung	CalCenter_2
Test Program Prüfprogramm	V1.01.10
Test Engineer Prüfer	MESSER

Used Test-/Calibration Interface Verwendete Prüf-/Kalibrierschnittstelle	–
Used Test-/Calibration Tools Verwendete Prüf-/Kalibriermittel	Keithley DMM2700 due 07/2019 Yokogawa CAL100 due 08/2019
Max. Deviation (Specification) Max. Abweichung (Spezifikation)	
Current Source Stromquelle	0,01% of end value / des Endwertes (20mA) + 0,02% of signal / des Signals
Frequency Source Frequenzgeber	0,01% of signal / des Signals

Notes Bemerkungen	The above mentioned calibration tools are traceable to national standards / NIST Die oben genannten Kalibriermittel sind rückführbar auf nationale Normale

Date, Signature 03/13/2019,

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Calibration Certificate
Kalibrations-Zertifikat

FieldCheck

Production Number / Fabrikationsnummer: 240223
Serial Number / Seriennummer: 860011402000

Page 2 of 2
Seite 2 of 2

Measuring Data On Incoming Inspection / Messdaten bei der Eingangsprüfung		Rated Value / Vorgabewert	Meas. Value / Messwert	Limit Value +/- / Grenzwert +/-	Pass / Fail / Gut/Fehlerhaft
Current Input	mA	0.000	**0.005**	0.005	Pass/Gut
Strom-Eingang	mA	20.000	**19.994**	0.010	Pass/Gut
Frequency Input	Hz	0.0	**0.0**	0.0	Pass/Gut
Frequenz-Eingang	Hz	8000.0	**8000.0**	4.0	Pass/Gut

Measuring Data After Calibration / Messdaten nach Kalibrierung		Rated Value / Vorgabewert	Meas. Value / Messwert	Limit Value +/- / Grenzwert +/-
Current Input	mA	0.000	**0.002**	0.002
Strom-Eingang	mA	10.000	**10.000**	0.004
	mA	20.000	**20.001**	0.005
Frequency Input	Hz	0.0	**0.0**	0.0
Frequenz-Eingang	Hz	1000.0	**1000.0**	1.0
	Hz	8000.0	**7999.9**	2.0

Functional Safety Check
Funktionaler Sicherheitscheck

This unit has passed the complete Functional Safety Check.
All voltages and currents produced by this unit are within tolerances.

Dieses Gerät hat den vollständigen funktionalen Sicherheitscheck bestanden.
Alle von diesem Gerät produzierten Spannungen und Ströme sind innerhalb der Toleranz.

Date, Signature 03/13/2019,

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Calibration Certificate
Kalibrations-Zertifikat

Simubox MID

Page 1 of 2
Seite 1 of 2

Production Number Fabrikationsnummer	8784351
Serial Number Seriennummer	JA0FE402000
Manufacturer Hersteller	Endress+Hauser Flowtec AG CH-4153 Reinach

Date Of Calibration Kalibrierdatum	03/13/2019
Location Ort	DG-Greenwood
Testing Instruction Prüfanweisung	CalCenter_2
Test Program Prüfprogramm	V1.01.10
Test Engineer Prüfer	MESSER

Used Test-/Calibration Interface Verwendete Prüf-/Kalibrierschnittstelle	--
Used Test-/Calibration Tools Verwendete Prüf-/Kalibriermittel	Keithley DMM2700 due 07/2019 Yokogawa CAL100 due 08/2019
Max. Deviation (Specification) Max. Abweichung (Spezifikation)	
Current Source Stromquelle	0,01% of end value / des Endwertes (20mA) + 0,02% of signal / des Signals
Frequency Source Frequenzgeber	0,01% of signal / des Signals

Notes Bemerkungen	The above mentioned calibration tools are traceable to national standards / NIST Die oben genannten Kalibriermittel sind rückführbar auf nationale Normale

Date Signature 03/13/2019

	JA0FE402000
	03-13-19
	8784351

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Calibration Certificate
Kalibrations-Zertifikat

SimuBox MID

Production Number / Fabrikationsnummer: 8784351
Serial Number / Seriennummer: JA0FF402000

Measuring Data On Incoming Inspection Messdaten bei der Eingangsprüfung (Calculated Mean Values / Berechnete Mittelwerte)	Rated Value Vorgabewert [µV]	Meas. Value Messwert [µV]	Limit Value +/- Grenzwert +/- [µV]	Pass / Fail Gut/Fehlerhaft
Meas. Range 1	57.0	57.0	1.0	Pass/Gut
Meas. Range 2	334.0	332.8	3.0	Pass/Gut
Meas. Range 3	2084.0	2081.8	10.0	Pass/Gut
Meas. Range 4	11926.0	11921.3	20.0	Pass/Gut

Measuring Data After Calibration Messdaten nach Kalibrierung (Calculated Mean Values / Berechnete Mittelwerte)	Rated Value Vorgabewert [µV]	Meas. Value Messwert [µV]	Limit Value +/- Grenzwert +/- [µV]
Meas. Range 1	50.0	49.8	0.5
Meas. Range 2	300.0	299.5	1.0
Meas. Range 3	2000.0	1999.9	3.0
Meas. Range 4	10000.0	9999.6	5.0

Date/ Signature: 03/13/2019.

From:	Alison O"Connor
To:	Beaudoin, Brenda (MECP); Cory Smith; Abby Armstrong
Cc:	Vanessa Greatrix; Andrew Trader
Subject:	Mississippi Mills WWTF Revised Annual Report
Date:	May-19-21 4:20:27 PM
Attachments:	Mississippi Mills WWTF- 2020 Annual Report-Rev1.pdf image003.png

Hello Brenda, Cory and Abby

When reviewing the Annual Report, Brenda advised me that the overflows at Gemmill's Bay SPS on February 8th and August 11th 2020 were spills due to mechanical issues. The mechanical issues led to overflows at the SPS.

I've updated the compliance report card, overflow and spill sections. The revised report is attached. If you have any questions, please let me know.

Alison O'Connor | Process and Compliance Technician | Mississippi Cluster | Cell: 613-250-8012