



City of Orillia

**2023 Annual Wastewater Collection System
Performance Report**

**March 2023
Water and Wastewater Division
Environment and Infrastructure Services Department**

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1.0 Introduction

Condition 4.6 from Schedule “E” of Environmental Compliance Approval (ECA) No. 125-W601 (Issue 2 dated March 3, 2023) requires the preparation of an annual performance report for the City’s wastewater collection system.

For the 2023 Annual Performance Report, the City is to report on previous ECAs pertaining to spills only where these occurred in the reporting period. Prior to the issuance of the new ECA No. 125-W601, only two stations had ECAs that required annual reporting including Forest Avenue North Pump Station (ECA # 7047-AN9LTA) and the Fittons Road East Pump Station (ECA # 7594-C22KBD). Further to this, there were no overflows, spills or abnormal discharge events in 2023 at either of these stations. The Cedar Island Road Sewage Pumping Station (ECA # 4848-C2AHU4) is still under construction, so the Elgin Street Sanitary Pump Station is still in active use. In 2023, the Royal Oak Pumping Station was decommissioned with upgrades that were completed in the area.

1.1 Background

The City maintains a wastewater collection system that includes 82 km of gravity sewers, 12 km of force main, 19 City-owned sanitary pump stations and one privately owned sanitary pump station, which the City is contracted to operate and maintain. All wastewater flows to one central pumping station at James Street, which is then pumped directly to the Wastewater Treatment Center (WWTC).

The City of Orillia Pumping Station System is part of the City’s sanitary collection system, which is classified by the Ontario Ministry of the Environment, Conservation and Parks (MECP) as a Class 2 system. This system discharges to the City’s WWTC, a conventional activated sludge plant which treats to a level of tertiary treatment, is classified as a Class 4 facility and outfalls to Lake Simcoe.

2.0 Discussion of ECA Conditions

2.1 Condition 4.6.1 – Report Preparation

This condition requires the submission of an annual performance report for the City’s wastewater collection system by March 31st of each year. The report is to cover the period from January 1 to December 31 of the preceding calendar year. This report covers 2023.

2.2 Condition 4.6.2 – Collection System Overflow or Spills of Sewage

This condition requires the submission to the District Manager of this annual report noting any collection system overflow or spills of sewage that occurred in the reporting period. There were no overflows or spills of sewage at any of the 19 City-owned and one privately owned sanitary pump stations in 2023. There were three sanitary spills reported within the collection system in 2023. All three spills were a result of congealed grease build-up

in maintenance hole (MH) structures and were reported to Spills Action Centre (SAC) and Simcoe Muskoka District Health Unit (SMDHU). Details of these spills are described in Section 2.8.

2.3 Condition 4.6.3 – Summary of Monitoring Data & Interpretation

This condition requires the submission of any monitoring data and an evaluation of this. Monitoring data for the sewage treated through the WWTC is discussed in a separate Annual Performance Report for the City's Wastewater Treatment Centre (ECA No. 1336-CTTL3V).

2.4 Condition 4.6.4 – Operating Problems & Corrective Actions

This condition requires the discussion of any operating problems encountered and corrective actions taken.

a. Sanitary Pumping Stations

There were no operating problems encountered at the sanitary pump stations apart from power outages during inclement weather.

The following is a discussion of issues addressed at the City's sanitary pump stations:

1. On January 13, 2023, a sand/silt substance was found to be entering the WWTC was confirmed. At this time investigations were conducted to limit additional debris from entering the plant. On February 8, 2023, cleaning of the wet wells at James Street Pumping Station was completed. Once the cleaning was completed, no further amounts of silt were found to be flowing from the pump station to the WWTC. The cleaning took significant time and resources and was difficult to manage due to the season and special considerations were needed due to cold temperatures.
2. On February 15, 2023, the Leacock Pumping Station received a scheduled wet well cleaning. At this time, both pumps were serviced including oil changes.
3. On March 9, 2023, Shannon Street Pumping Station Pump #1 was removed for rebuilding. On April 3, 2023, this pump was reinstalled and a service including oil change was performed on the second pump located at this station.
4. On July 6, 2023, Leacock Pumping Station Pump #1 was removed to troubleshoot a change in pump hours. It was determined that the pump required a full rebuild including replacing the stator. On July 26, 2023, the pump was reinstalled, and a new flush port was installed.

5. On October 9, 2023, Broadview Pumping Station Pump #2 required a new start capacitor as the pump faulted. The new capacitor was installed the same day.
6. On September 12, 2023, Tudhope Pumping Station Pump #2 had faulted electrically. On December 12, 2023, the rebuilt pump including a new stator was reinstalled and returned to service.

b. Sanitary Linear Works

1. On June 27, 2023, there was a report of backed up sewer at 308 Collins Dr. The local infrastructure and MHs were surcharged due to heavy rain event. Vacor trucks were called to maintain levels until the storm and heavy flows subsided.
2. On July 13, 2023, a sink hole was reported at the intersection of Matchedash St. and Tecumseth St. This sink hole was a result of a broken clay pipe entering MH. The broken pipe was removed and replaced with new PVC.
3. On September 24, 2023, there was a report of a backup at 67 Simcoe St. Found main was surcharged due to root intrusion, which was cleared with City forces and rodding machine.
4. During a review of CCTV conducted in 2023 of various roads, it was found that there was a contractor cross bore through the sanitary main on John St. On December 18, 2023, the main was excavated, the cross bore service was relocated, and the main repaired.

2.5 Condition 4.6.5 – Calibration, Maintenance and Repairs

This condition requires a summary of all calibration, maintenance and repairs carried out in the reporting year on major equipment and infrastructure. Manufacturers recommend an annual calibration for influent and effluent monitoring equipment. IndusControl Inc. was contracted to carry out calibrations in 2023. The annual instrumentation calibration reports for 2023 are included in the Attachment and include both influent and effluent flow monitors.

Repairs carried out on major structures for pump stations included:

- On October 5, 2023, Fittons West Pump station underwent repairs to the volutes on two of three pumps.
- Routine maintenance occurred at the pump stations including wet well cleanings, float replacements and UPS battery replacements.

Repairs carried out on major structures for the linear infrastructure included:

- Routine maintenance occurred for sanitary mains, forcemains, and MH structures including backflushing, cleaning, rodding, and inspecting. Repairs to frame and

covers were made to various MH structures.

In 2023, the City proceeded with a CCTV inspection program to evaluate potential sanitary sewer mains that could be rehabilitated with a new liner. Several sites have been identified and will be relined in 2024. Going forward, this program will continue to evaluate sanitary sewer mains ahead of the rehabilitation of the roadworks to confirm lining is a viable option over requiring a full replacement of the sanitary sewer.

Additionally, a 10-year rotating schedule for CCTV inspection of the in-service mains will be implemented for 2025, in addition to the CCTV work shown above.

In 2023, the City of Orillia undertook a project to implement a new work order system, called CityWide. The transition between Antero Maintenance Data Management Software, the previous maintenance program in use, was not seamless. As a result, tracking of the individual work orders is not available for 2023. However, major emergency and planned repairs are indicated above. Typical work orders for the system and equipment include visual inspection, oil changes, filter replacements, valve exercising, greasing mechanical equipment, and oil checks. It is expected that the CityWide program will be fully implemented by June 2024, to provide additional data reporting in future years.

The City is committed to maintaining and inspecting its collection system. The following programs are exercised annually:

- Spring/fall rodding of known areas of concern.
- Annual backflushing of known areas of concern.
- Weekly flushing and inspection of known areas of concern.
- Manhole inspections.

It is anticipated that with budget approval in 2025, the City will begin a CCTV inspection program that will aim to inspect all sanitary sewer mains on a 10-year cycle, with critical or poor conditioned mains inspected more frequently.

2.6 Condition 4.6.6 – Summary of Complaints

This condition requires a summary of complaints received in the reporting year from the public and any steps taken to address them. In 2023, 49 complaints were received related to the sanitary collection system. All complaints were fully investigated by City staff. 42 of these complaints were directly related to private plumbing issues. The remainder of these were failed sewer laterals or blockages on City property.

In 2023, there was 1 complaint received related to the sanitary pump stations due to odour. Once odour was confirmed a wet well cleaning took place early the following week to address the issue.

2.7 Condition 4.6.7 – Alterations to Collection System

As per Schedule D of ECA 125-W601, “Alterations” include the following items (excluding repairs):

- a) An extension of the system,
- b) A replacement or retirement of part of the system, or
- c) A modification of, addition to, or enlargement of the system.

In 2023, the following alterations were made to the collection system:

Extensions of the System

- 471.6 metres of new 200 mm sanitary sewer was installed on Orion Boulevard.

Replacements/Retirements of Part of the System

- 1051 metres of new sanitary sewer was installed on Centennial Drive.
- 603.2 Meters of new sanitary sewer was installed on Elgin Street.
- 125 meters of new sanitary sewer was installed on Matchedash Street.
- 667 meters of new sanitary sewer was installed on Laclie Street
- 106 meters of new sanitary sewer was installed on Tecumseth Street

Modification of, Addition to, or Enlargement of the System

- None.

None of the alterations posed a significant drinking water threat.

2.8 Condition 4.6.8 – Overflows and Spills

This condition requires discussion of any overflow and spills from the sanitary collection system. There were three sanitary spills reported within the collection system in 2023. These spills were a result of congealed grease build-up at commercial property line MH structures. The spills were reported to Spills Action Centre (SAC) and Simcoe Muskoka District Health Unit (SMDHU). Details of these events are as follows:

1. SAC Reference Number 1-1KU0SS - January 31, 2023 – 269 Memorial Ave.

City staff discovered foreign material in a commercial property line manhole caused the escape of 500L of sewage. The spill was immediately cleaned up by City staff and the blockage was removed. No follow up action or additional measures were required by SAC or SMDHU.

2. SAC Reference Number 1-1QBR5V – March 28, 2023 – 320 Memorial Ave.

Reports of sewage on the road were received by City staff at 14:30. A crew was immediately dispatched. The spill was cleaned up using a Vactor Truck. Two cubic metres of sewage flowed into the nearest catch basin. MH 572 was found to be

completely plugged with grease. The manhole and upstream pipes were rodded and flushed, and the sewer began flowing normally at 17:00. The City advised the owner of the commercial property of the grease issues and has put in place a more vigorous inspection program with the property owner.

3. SAC Reference Number – Not Provided - April 24, 2023 - James Court

Reports of sewage coming from MH 623 on James St. were received by City staff. Called in pumper truck and pumped down stream MH and removed a grease blockage. Called in Rodding machine to rod both directions to remove additional grease from main. Approximately 5 m³ of sewage was spilled and 5 L of sodium hypochlorite was added to the storm catch basin. The road was flushed clean. No further action was required.

2.9 Condition 4.6.9 – Efforts to Reduce Overflows, Spills and Bypasses

This condition requires discussion of efforts to reduce sanitary collection system (including pumps station) overflows, spills and bypasses. The City of Orillia's sanitary collection system is not combined with the storm sewer system so overflows, spills and bypasses are not an issue at present. The City does, however, see elevated flows from inflow and infiltration, particularly after wet weather events.

a) Projects undertaken and completed in the sanitary sewer system that reduce the potential for pump station bypasses, pump station and collection system overflows and spills include:

- The City regularly conducts manhole inspection and rehabilitation work to minimize inflow and infiltration.
- In 2023, a number of sewers were CCTV'd. CCTV camera inspections are used to inform City staff of required repair and replacement planning.

In 2023, capital budget allocations were approved as follows:

- \$200,000 for CCTV and Sewer Relining,
- \$20,000 for repairs to Fittons Road West Pumping Station pumps, and
- \$20,000 for a replacement flow meter at Septage Receiving.

The inflow and infiltration study conducted in 2023 had 20 monitoring devices installed at various locations within the City, within catchment areas that had been previously identified as likely sources of inflow and infiltration. The monitoring was conducted from April 26, 2023, to July 31, 2023. During this time, there were 7 rain events with more than 15 mm of rain, including the most intense storm on July 12, 2023, with 46.5 mm over a 30-minute period. There were several recommendations that were made in the report, in which the City is reviewing and implementing to assist in reducing the amount of inflow and infiltration within the system.

b) The City does not have combined sewers and is not required to have a Pollution

Prevention and Control Program (PPCP), as defined in this ECA.

The City maintains an Industrial, Commercial and Institutional (ICI) Inspection Program. The purpose of this program is to monitor and enforce provisions set out in the City of Orillia's Sewage - Discharge By-Law (Municipal Code Chapter 1047). An annual report is prepared providing an overview of the ICI inspections conducted and the compliance sampling undertaken to confirm that facilities are complying with Chapter 1047.

- c) In terms of assessing the effectiveness of each action taken, the City proactively established a Wastewater Quality Management System (WWQMS) in 2023. A major function of the WWQMS will be to track and assess the effectiveness of actions taken to maintain system compliance.
- d) The City takes a number of efforts to achieve conformance with Procedure F-5-1 (Determination Of Treatment Requirements For Municipal And Private Sewage Treatment Works). The City operates a tertiary treatment system at its Wastewater Treatment Centre (WWTC). Please refer to the Annual WWTC Performance Report for more information on conformance with Procedure F-5-1.
- e) Public reporting is discussed in section 2.10 of this report.

2.10 Condition 4.7 Report Availability for the Public

This annual performance report is available to the public at no charge on the City of Orillia's [website linked here](#).

To access the report in person, or for assistance, please visit:


**City of Orillia
City Centre, 1st Floor Reception
50 Andrew St. S., Suite 300
Orillia, ON L3V 7T5**

3.0 Summary

The City maintains an effective wastewater collection system. Significant funding is allocated for collection system maintenance and improvements. The City is in the process of implementing a comprehensive inflow and infiltration program and has already proactively established a Wastewater Quality Management System in 2023.

Attachment – 2023 Calibration Reports

1. Annual Instrumentation Calibration Reports

CUSTOMER NAME: CITY OF ORILLIA		VERIFICATION INSTRUMENTS LIST-2023						
02 ORILLIA WWTP								
SR. NO.	TAG	LOCATION	MAKE	MODEL	SERIAL #	COMMENT	CAL DATE	DUE DATE
1	FIT02	DAF BLDG-TWAS FEED	ROSEMOUNT	8712DR12N0M4	860177174		May-23	May-24
2	FIT01	DAF BLDG – DAF FEED	Endress+Hauser	Promag 400	S4084B16000		May-23	May-24
3	FIT-SLG01	PRIMARY BLDG BASEMENT – PRIMARY SLUDGE	SIEMENS	7ME65110-4HJ11-1AA0	7ME651 753614T247		May-23	May-24
4	FIT-DG01	DIGESTER BLDG BASEMENT – LAGOONED SLUDGE	SIEMENS	7ME690-1AA10-1BA0	7ME651 753814T247		May-23	May-24
5	FIT01	UV BLDG – FINAL EFFLUENT FLOW	MULTIRANGER	200	071901107VV		May-23	May-24
6	N/A	FINAL EFFLUENT BYPASS FLOW	MULTIRANGER	OCM III	PBD/V8190064		May-23	May-24
7	FIT-261	COO-WWTC	E+H	PROMAG 50 W	DB08B816000		May-23	May-24
8	FIT-102	DIGESTER BLDG BASEMENT	E+H	PROLINE T_MASS 65	F70AC502000		May-23	May-24
9	FIT-101	DIGESTER BLDG BASEMENT	E+H	PROLINE T_MASS 65	F70AC602000		May-23	May-24
10	FIT03	DAF BLDG	E+H	PROMAG 50 P	6B026416000		May-23	May-24
11	AIT-PRIMARY BUILDING BASEMENT CH4	MAIN AREA	DRAEGER	8344808	ARML 0348		May-23	May-24
12	AIT-PRIMARY BUILDING BASEMENT H2S	MAIN AREA	DRAEGER	8344404	ARND 1512		May-23	May-24
13	AIT-PRIMARY BUILDING BASEMENT CH4	TUNNEL AREA	DRAEGER	8344808	ARMM 0596		May-23	May-24
14	AIT-PRIMARY BUILDING BASEMENT H2S	TUNNEL AREA	DRAEGER	8344404	ARND 1530		May-23	May-24
15	METH01	DIGESTER BLDG CONDENSATE ROOM CH4	DRAEGER	8344808	ARMM 0602		May-23	May-24
16	H2S01	DIGESTER BLDG CONDENSATE ROOM H2S	DRAEGER	8344404	ARND 1538		May-23	May-24
17	OXY01	DIGESTER BLDG CONDENSATE ROOM O2	DRAEGER	8344404	ARND 1520		May-23	May-24
18	FIT-01	FOREST AVE	E+H	PROMAG 53 W	MA0ADF16000		May-23	May-24
19	N/A	Boiler Room-H2S	Industrial Scientific	Works Alone2	N/A	Out of Service	N/A	N/A
20	N/A	Boiler Room-CH4	Industrial Scientific	Works Alone2	N/A	Out of Service	N/A	N/A
21	Filter 2	Filter Building	Krohne	Enviromag 2100	C17501447		May-23	May-24
22	Filter 1	Filter Building	Krohne	Enviromag 2100	C17500974		May-23	May-24
23	N/A	Aeration	E+H	PROLINE T_MASS 65	N10D6F02000		May-23	May-24
24	FIT292	Aeration	E+H	PROLINE T_MASS 65	N10D6C02000		May-23	May-24
25	FIT293	Aeration	E+H	PROLINE T_MASS 65	N10D6E02000		May-23	May-24
03 BAYVIEW SPS								
26	FIT-01	BAYVIEW SPS	F&P	50XM1000	9511160559		May-23	May-24
27	FIT-02	BAYVIEW SPS	MULTIRANGER	OCM II	12861339		May-23	May-24

04 CHAMPLAIN SPS								
28	FIT1000	CHAMPLAIN SPS	ROSEMOUNT	8712ESR1A1N0M4	292635		May-23	May-24
29	NA	DRY PIT 'A' CH4	MSA	ULTIMA XE	E10-3355355-40-003		May-23	May-24
30	AIT-1004-04	DRY PIT H2S	MSA	ULTIMA XE	50-001	Out of Service	N/A	N/A
31	AIT-1004-05	DRY PIT CO	MSA	ULTIMA XE	E10-3355355-30004	Out of Service	N/A	N/A
32	AIT-1004-06	DRY PIT NON CH4	MSA	ULTIMA XE	40-003	Out of Service	N/A	N/A
33	AIT-1004-16	WET WELL NON CH4 'A'	MSA	ULTIMA XE	50-003	Out of Service	N/A	N/A
34	AIT-1004-01	WET WELLCH4 'A'	MSA	ULTIMA XE	30-001	Out of Service	N/A	N/A
35	AIT-1004-14	WET WELL H2S 'A'	MSA	ULTIMA XE	40-001	Out of Service	N/A	N/A
36	AIT-1004-01	WET WELL CO 'A'	MSA	ULTIMA XE	20-003	Out of Service	N/A	N/A
37	AIT-1004-12	WET WELL NON CH4 'B'	MSA	ULTIMA XE	50-004	Out of Service	N/A	N/A
38	AIT-1004-3	WET WELLCH4 'B'	MSA	ULTIMA XE	30-003	Out of Service	N/A	N/A
39	AIT-1008-03	WET WELL H2S 'B'	MSA	ULTIMA XE	20-001	Out of Service	N/A	N/A
40	AIT-1004-09	WET WELL CO 'B'	MSA	ULTIMA XE	E10-3355355-40-002	Out of Service	N/A	N/A
41	AIT-1004-13	SCREEN ROOM CO	MSA	ULTIMA XE	E10-3355355-30-002	Out of Service	N/A	N/A
42	AIT-1004-10	SCREEN ROOM NON CH4	MSA	ULTIMA XE	E10-3355355-40-004	Out of Service	N/A	N/A
43	AIT-1004-11	SCREEN ROOM CH4	MSA	ULTIMA XE	E10-3355355-20-002	Out of Service	N/A	N/A
44	AIT-1004-08	SCREEN ROOM H2S	MSA	ULTIMA XE	50-002	Out of Service	N/A	N/A
05 JAMES SPS								
45	FIT-01	JAMES SPS	KHRONE	IFC 090	A0658612		May-23	May-24
46	AIT-CO	JAMES SPS	DRAEGER	4544404	ERHB17641		May-23	May-24
47	AIT-CH4	JAMES SPS	DRAEGER	4544404	ERHB1175		May-23	May-24
48	AIT-H2S	JAMES SPS	DRAEGER	4544404	ERHB1265		May-23	May-24
49	AIT-O2	JAMES SPS	DRAEGER	4544404	ERHB1771		May-23	May-24
50	AIT-04	JAMES SPS	MSA	ULTIMA XE	K06-2285771-40-001	Sensor found faulty	May-23	May-24
51	AIT-03	JAMES SPS	MSA	ULTIMA XE	K06-2285771-40-001		May-23	May-24
52	AIT-02	JAMES SPS	MSA	ULTIMA XE	K06-2285771-30-001		May-23	May-24
53	AIT-01	JAMES SPS	MSA	ULTIMA XE	K06-2285771-10-001	Sensor has not been replaced yet since last cal	N/A	N/A
COLOUR CODE		STATUS OF INSTRUMENT						
		VERIFICATION/CALIBRATION FAILED						
		VERIFICATION NOT COMPLETE/OUT OF SERVICE						
		VERIFICATION COMPLETE						
		OBSOLETE MODEL						



INDUSCONTROL INC
3170 Ridgeway Drive Unit 11 Mississauga
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Email : service@indus-control.com

SERVICE REPORT

Client Name	City of Orillia- WWTP	Date of Service	May 2023
Client Address	40 Kitchener Street, Orillia, ON	Service Person	Tushar Patel
PO Number	N/A	Ref./Contract No.	CO1452-2305

PURPOSE OF SERVICE:

- Perform Calibration/Verification of Flowmeters & Gas Detectors.
- Provide Calibration/Verification Report with Result and Comments.
- Provide Recommendation if needed.

WORK DONE:

- Performed calibration/verification of Flowmeters and Gas Detectors as per the instrument list provided found them working within specifications except the following instruments.

ORILLIA WWTP:

Sr. No.	Tag No	Make/Model	Serial No	Results/Comments
1	FIT-261	E+H/Promag 50W	DB0BB816000	Obsolete Model: Need to be replace. Please see Appendix A for more details.
2	FIT-03	E+H/Promag 50P	6B026416000	Obsolete Model: Need to be replace. Please see Appendix A for more details.
3	FIT-01	E+H/Promag 53W	MA0ADF16000	Obsolete Model: Need to be replace. Please see Appendix A for more details.
4	Boiler Room- H2S	Industrial Scientific/ Works Alone2	N/A	Out of Service
5	Boiler Room- CH4	Industrial Scientific/ Works Alone2	N/A	Out of Service

BAYVIEW SPS:

Sr. No.	Tag No	Make/Model	Serial No	Results/Comments
1	FIT-01	F & P/50XM1000	9511160559	Obsolete Model. Spare parts are no longer available. Need to be replace.

CHAMPLAIN SPS:

Sr. No.	Tag No	Make/Model	Serial No	Results/Comments
1	AIT-1004-04	MSA/ULTIMA XE	E10-3355355-50-001	Out of Service
2	AIT-1004-05	MSA/ULTIMA XE	E10-3355355-30-004	Out of Service
3	AIT-1004-06	MSA/ULTIMA XE	E10-3355355-40-004	Out of Service
4	AIT-1004-16	MSA/ULTIMA XE	E10-3355355-50-003	Out of Service
5	AIT-1004-01	MSA/ULTIMA XE	E10-3355355-30-001	Out of Service
6	AIT-1004-14	MSA/ULTIMA XE	E10-3355355-40-001	Out of Service
7	AIT-1004-01	MSA/ULTIMA XE	E10-3355355-20-003	Out of Service
8	AIT-1004-12	MSA/ULTIMA XE	E10-3355355-50-004	Out of Service
9	AIT-1004-3	MSA/ULTIMA XE	E10-3355355-30-003	Out of Service
10	AIT-1008-03	MSA/ULTIMA XE	E10-3355355-20-001	Out of Service
11	AIT-1004-09	MSA/ULTIMA XE	E10-3355355-40-002	Out of Service
12	AIT-1004-13	MSA/ULTIMA XE	E10-3355355-30-002	Out of Service
13	AIT-1004-10	MSA/ULTIMA XE	E10-3355355-40-004	Out of Service
14	AIT-1004-11	MSA/ULTIMA XE	E10-3355355-20-002	Out of Service
15	AIT-1004-08	MSA/ULTIMA XE	E10-3355355-50-002	Out of Service

JAMES SPS:

Sr. No.	Tag No	Make/Model	Serial No	Results/Comments
1	AIT-04	MSA/ULTIMA XE	K06-2285771-40-001	Sensor found faulty. Calibration Test Failed. Faulty sensor need to be replaced.
2	AIT-01	MSA/ULTIMA XE	K06-2285771-10-001	Sensor has not been replaced yet since last cal(2022)
3	AIT-CH4	DRAEGER/Polytron 8000	ERHB17641	Transmitter need to be relocate at eye level to perform calibration easily.

APPENDIX

Appendix A

Discontinue product. As of now, All the promag 50/53 is being calibrated by E+H factory calibrated Fieldcheck devices which use MID simubox. E+H has discontinued the production of MID simubox for a while now and those which are available in the market are non-repairable and non-replaceable. That means, the calibration service provider cannot provide you the accurate reports generated from factory calibrated devices if MID simubox is not in possession with the calibration service provider. If the flow tube is not accessible or in the confined space or not enough straight run, we won't be able to verify the unit even with ultrasonic clamp-on unit which has accuracy of more than +/- 5-10%.

Device details

Serial number	7801FA16000
Order code	50W25-UL0A1RC2BAAD
Short description	Promag 50W25, DN25 1"
Device type	Flow, Electro-Magnetic
Supplier	Endress+Hauser
Manufacturing date	08/2005



Export as pdf

Product Status	● Order stop		
Phase out date	2/2018	Order stop	12/2019
Spare sensor until	12/2019	Calibration until	Open

May 12, 2023

Date

Version: 20-01



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener street,
Orillia, ON L3V6Z9

Device Information

Make: Rosemount
Model: 8712DR12N0M4
Order Code: N/A
Serial No.: 860177174
Tag: FIT02
Job Location: DAF Bldg TWAS Feed

Service Information

Date: May 9, 2023
Report No: CO1452-2305-01
Job No: CO1452-2305

Flow Details

Unit: L/Min
Flow Range: 0-600
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 600

Sensor Details

Line size: 3 Inch
Flow Cal Tube No.: 0964106009601005
Mounting: Remote

Inst. Reading	AS FOUND	AS LEFT
Totalizer(L)	311507520	311508672
Flow (L/Min)	0	0

Maintenance Checklist

Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK

Remarks

Instrument Test Information and Results

Test-Point as Per Calibration KIT	Calculated Flow (FPS)	Calculated O/P (mA)	UUT Display (FPS)	UUT Measured Output (mA)	Deviation (FPS)
0.00	0.00	4.00	0.01	4.01	-0.01
3.00	3.00	5.60	2.98	5.58	0.02
10.00	10.00	9.33	10.02	9.36	-0.02
30.00	30.00	20.00	30.03	20.04	-0.03

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Rosemount	Fluke	NA
Model No:	8714D	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	<input checked="" type="checkbox"/> Passed	<input type="checkbox"/> Fail	<input type="checkbox"/> Not Verified
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Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel

Stamp/Signature

Printed Date: May 9, 2023

End of Report

Version: 19-12

Plant operator: FIT01 (WAS TO DAF)

Device information

Location	Orillia WWTP (Pri Basement)
Device tag	FIT-01 (WAS TO DAF)
Module name	K323-00
Nominal diameter	DN80 / 3"
Device name	Promag 400
Order code	5W4C80-R567/0
Serial number	S4084B16000
Firmware version	02.01.00


Calibration

Calibration factor	0.9849
Zero point	0.8

Verification information

Operating time (counter)	685d22h40m05s
Date/time (manually recorded)	08.05.23 10:02
Verification ID	3
Verification mode	Standard verification

Overall verification result*

Passed Details see next page

*Result of the complete device functionality test via Heartbeat Technology

Confirmation

Heartbeat Verification verifies the function of the flowmeter within the specified measuring tolerance, over the useful lifetime of the device, with a total test coverage > 94 %, and complies with the requirements for traceable verification according to DIN EN ISO 9001:2008 – Section 7.6 a. (attested by TÜV-SÜD Industrieservices GmbH)

Notes

08.05.23

Date

Operator's signature

Inspector's signature

Plant operator: FIT01 (WAS TO DAF)

Device identification and verification identification

Serial number	S4084B16000
Device tag	FIT-01 (WAS TO DAF)
Verification ID	3



Sensor	✔ Passed
Shot time symmetry	✔ Passed
Hold voltage symmetry	✔ Passed
Coil current loss	✔ Passed
Coil current stability	✔ Passed
Coil resistance	✔ Passed
E1 electrode cable	✔ Passed
E2 electrode cable	✔ Passed
EPD electrode cable	✔ Passed
Sensor electronic module (ISEM)	✔ Passed
Supply voltage	✔ Passed
Internal voltages	✔ Passed
Linearity and reference voltage	✔ Passed
Offset of electrode measuring circuit	✔ Passed
Hold voltage feedback	✔ Passed
Shot voltage feedback	✔ Passed
Electronic current loss	✔ Passed
Coil circuit measurement	✔ Passed
Shot control circuit	✔ Passed
Electrode signal integrity	✔ Passed
System status	✔ Passed
I/O module	✔ Passed
Input/output 1	✔ Passed
Input/output 2	? Not done
Input/output 3	? Not done

Plant operator: FIT01 (WAS TO DAF)

Device identification and verification identification

Serial number	S4084B16000
Device tag	FIT-01 (WAS TO DAF)
Verification ID	3



Test item with value	Unit	Actual	Min.	Max.	Visualization
Sensor					
Shot time symmetry deviation		1.0000	0.9000	1.1000	□□□□■□□□□□
Hold voltage symmetry deviation		1.0000	0.9000	1.1000	□□□□■□□□□□
Coil current loss deviation	%	-0.03486	-10.0000	10.0000	□□□□■□□□□□
Coil current offset	%	0.0000	-0.1000	0.1000	□□□□■□□□□□
Coil current deviation	%	-0.008123	-0.1000	0.1000	□□□□■□□□□□
Coil resistance value	Ohm	82.0	50.0	240.0	□■□□□□□□□□
E1 electrode impedance	Ohm	502.01			
E2 electrode impedance	Ohm	501.38			
EPD electrode impedance	Ohm	525.14			
E1/E2 electrode impedance on E1	Ohm	541.64			
E1/E2 electrode impedance on E2	Ohm	541.31			
Sensor electronic module (ISEM)					
Supply voltage 30.0V	V	31.15	27.000	35.000	□□□□■□□□□□
Linearity and reference voltage 1		0.9997	0.9900	1.0100	□□□□■□□□□□
Linearity and reference voltage 2		0.9996	0.9900	1.0100	□□□□■□□□□□
Measuring point offset		-17.8122	-100.0000	100.0000	□□□■□□□□□□
Hold voltage feedback value	%	3.10	-10.0	10.0	□□□□□□■□□□
Shot voltage feedback value	%	-0.64	-20.0	20.0	□□□□■□□□□□
Electronic current loss deviation	%	0.49	-10.0000	10.0000	□□□□■□□□□□
Coil circuit value	%	0.00	-1.0	1.0	□□□□■□□□□□
Shot control circuit value	%	-0.083	-10.0	10.0	□□□□■□□□□□
Electrode signal integrity deviation	%	-0.16	-40.0	40.0	□□□□■□□□□□

Test item with value	Unit	Actual	Min.	Max.	Visualization
I/O module					
Output 1 value 1	mA	8.1924	7.9865	8.3499	□□□□□■□□□□
Output 1 value 2		0.0000	0.0000	0.0000	□□□□□□□□□□
Output 2 value 1		0.0000	0.0000	0.0000	□□□□□□□□□□
Output 3 value 1		0.0000	0.0000	0.0000	□□□□□□□□□□

Plant operator: FIT01 (WAS TO DAF)

Device identification and verification identification

Serial number	S4084B16000
Device tag	FIT-01 (WAS TO DAF)
Verification ID	3



Test item with value	Unit	Actual
Process conditions		
Volume flow value verification	m ³ /d	314.2823
Conductivity value verification	µS/cm	-nan
Electronic temperature	°F	89.7
Current difference potential	V	0.02163
Current potential electrode 1	V	0.2516
Current potential electrode 2	V	0.2309
Current potential electrode Pipe GND	V	0.003812



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener street,
Orillia, ON L3V6Z9

Device Information

Make: Siemens
Model: 7ME65110-4HJ11-1AA0
Order Code: N/A
Serial No.: 7ME651753614T247
Tag: FIT-SLG01
Job Location: Primary bldg basement-primary sludge

Service Information

Date: May 8, 2023
Report No: CO1452-2305-03
Job No: CO1452-2305

Flow Details

Unit: m3/hr
Flow Range: 250
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 250

Sensor Details

Unit: m3/hr
Diameter: 150mm 6 inch
Mounting: Compact

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	503049	503051
FLOW (m3/hr)	0.00	0.00

Maintenance Checklist

Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK

Remarks

Instrument Test Information and Results

Test-Point	UUT Display (m3/hr)	Flow measured on Hand Held Calibrator (m3/hr)	Deviation (m3/hr)
1	23.98	24.80	-0.82
2	31.89	32.10	-0.21
3	36.70	37.49	-0.79

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	Clamp on calibrator	NA
Manufacturer:	Fluke	Greyline Instruments Inc.	NA
Model No:	179	PDFM 5.1	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel

Stamp/Signature

Printed Date: May 8, 2023

End of Report

Version: 19-12



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener street,
Orillia, ON L3V6Z9

Device Information

Make: Siemens
Model: 7ME65110-4HJ11-1AA0
Order Code: N/A
Serial No.: 7ME651753814T247
Tag: FITDG01
Job Location: Digester bldg basement-lagoon sludge

Service Information

Date: May 8, 2023
Report No: CO1452-2305-04
Job No: CO1452-2305

Flow Details

Unit: m3/hr
Flow Range: 250
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 250

Sensor Details

Unit: m3/hr
Diameter: 150mm 6 inch
Mounting: Compact

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	812448	812449
FLOW (m3/hr)	8.29	9.10

Maintenance Checklist

Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK

Remarks

Instrument Test Information and Results

Test-Point	UUT Display (m3/hr)	Flow measured on Hand Held Calibrator (m3/hr)	Deviation (m3/hr)
1	8.03	8.73	-0.70
2	7.49	8.04	-0.55
3	7.98	8.97	-0.99

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	Clamp on calibrator	NA
Manufacturer:	Fluke	Greyline Instruments Inc.	NA
Model No:	179	PDFM 5.1	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks:

Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel

Stamp/Signature

Printed Date: May 8, 2023

End of Report

Version: 19-00



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT- MULTIRANGER 200
OPEN CHANNEL FLOW MEASUREMENT

Customer Name:	City of Orillia	Site/Plant	40 kitchener street,
Plant Name:	Orillia WWTP	Address:	Orillia, ON L3V6Z9

Device Information		Service Information	
Make:	Milltronics	Date:	May 8, 2023
Model:	Multiranger 200	Report No:	CO1452-2305-05
Order Code:	N/A	Job No:	CO1452-2305
Serial No.:	071901107VV		
Tag:	FIT01		
Job Location:	UV Building-Final Effluent flow		


Inst. Reading	AS FOUND	AS LEFT
Point1(m)	1.303	1.292
Point2(m)	1.097	1.096

Flow Details	
Unit:	m3/day
Flow Range:	0 - 150000 m3/day
Current Output:	4-20 mA
4 mA Set Point	0
20 mA Set Point	150000

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Programming Parameter of Instrument-Point1					
Parameter	Discription	Value	Parameter	Discription	Value
P001	Operation	1.00000	P601	Flow Exponent	1.55
P002	Material	1.000	P602	PMD Dimension	1.000 m
P004	Transducer	112(XRS-5)	P603	Maximum Head	1.5m
P005	Units	1	P604	Maximum Flow	1000
P006	Empty	1.949m	P605	Zero Head	0.00
P007	Span	1.5m	P608	Flow rate Units	0 (ratiometric Calculation)
P620	Low Flow cutoff	0.075m	P210	4mA Setpoint	0.000m
P600	Primary Mea. Device	0	P211	20mA Setpoint	1.500m

Programming Parameter of Instrument-Point2					
Parameter	Discription	Value	Parameter	Discription	Value
P001	Operation	1.00000	P601	Flow Exponent	1.55
P002	Material	1.000	P602	PMD Dimension	1.000 m
P004	Transducer	112(XRS-5)	P603	Maximum Head	1.5m
P005	Units	1	P604	Maximum Flow	1000
P006	Empty	1.487m	P605	Zero Head	0.00
P007	Span	1.5m	P608	Flow rate Units	0 (ratiometric Calculation)
P620	Low Flow cutoff	0.075m	P210	4mA Setpoint	0.000m
P600	Primary Mea. Device	0	P211	20mA Setpoint	1.500m

Instrument Test Information and Results-Point1					
Input (%)	Calculated Flow(m3/day)	Calculated Input (mA)	Flow on Scada (m3/day)	UUT Measured Output (mA)	Deviation (m3/day)
0	0.00	4.00	0.00	4.00	0.00
25	37500.00	8.00	37501.02	8.10	-1.02
50	75000.00	12.00	74998.89	11.96	1.11
75	112500.00	16.00	112499.78	15.96	0.22
100	150000.00	20.00	150001.00	20.03	-1.00
Instrument Test Information and Results-Point2					
Input (%)	Calculated Flow(m3/day)	Calculated Input (mA)	Flow on Scada (m3/day)	UUT Measured Output (mA)	Deviation (m3/day)
0	0.00	4.00	0.03	4.03	-0.03
25	37500.00	8.00	37501.78	8.05	-1.78
50	75000.00	12.00	74998.08	11.96	1.92
75	112500.00	16.00	112501.03	16.06	-1.03
100	150000.00	20.00	149999.20	19.96	0.80
Echo Profile Point 1					
Information of Tools used for Verification of the Instruments					
Device Description:	Manufacturer		Model		
Electrical Multimeter	Fluke		179		
* Refer Calibration Tools Certificates submittal for more Information					
Verification Test Result:	<input checked="" type="checkbox"/> Passed		<input type="checkbox"/> Fail		<input type="checkbox"/> Not Verified
Overall Remarks:	Verification Test Passed. Program parameters Verified. Limited Verification Performed.				
Service Technician :	Tushar Patel			Stamp/Signature	
Printed Date:	May 8, 2023				
End of Report				Version: 19-12	



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT - OCM III
OPEN CHANNEL FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street,
Orillia, ON L3V6Z9

Device Information
Make: Milltronics
Model: Multiranger OCM111
Order Code: N/A
Serial No.: PBD/V8190064
Tag: N/A
Job Location: Final Effluent bypass flow

Service Information
Date: May 8, 2023
Report No: CO1452-2305-6
Job No: CO1452-2305

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	260511	260511
FLOW (l/sec)	0.0	0

Flow Details
Unit: L/SEC
Flow Range: 2489.9
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 2489.9

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Programming Parameter of Instrument					
Parameter	Description	Value	Parameter	Description	Value
F0	Access Code	2.71828	P7	Height of Max. Head	11.81099 inch
P1	Dimension Unit (inch)	1	P32	Totalizer Multiplier	1000
P3	Exponential Device	15	P42	Head by OCM III	1
P4	Cal. Method -Absolute	0	P45	Low Flow Cut-off	0
P5	Flow Unit - L/SEC	0	P46	Range at Zero Head	73 inch
P6	Max Flow rate	2489.9L/SEC	P47	Blanking Distance	24.022237 inch

Instrument Test Information and Results					
Input (%)	Calculated Flow(l/sec)	Calculated Input (mA)	Flow Measurement (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.03	4.03	-0.03
25	622.47	8.00	623.10	8.05	-0.63
50	1244.95	12.00	1245.67	12.06	-0.72
75	1867.42	16.00	1868.56	16.08	-1.14
100	2489.90	20.00	2490.81	20.08	-0.91

Information of Tools used for Verification of the Instruments		
Device Description:	Manufacturer	Model
Electrical Multimeter	Fluke	179

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Verification Test Passed.Limited Verification Performed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature

End of Report

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

ORILLIA WWTP

Customer

Plant

Order code

FITRAS-1

PROMAG 50 W DN350

Tag Name

1.0915 - 1.0915

Device type

K-Factor

DB0BB816000

-2

Serial number

Zero point

V2.03.00

V1.04.02

Software Version Transmitter

Software Version I/O-Module

11.05.2023

13:19

Verification date

Verification time

Verification result Transmitter: Passed

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

FieldCheck Details

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8714684

Production number

1.00.01

Software Version

04/2023

Last Calibration Date

11.05.2023



Date

Operator's Sign

Inspector's Sign

Overall results:

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

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

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

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FITRAS-1
Device type	PROMAG 50 W DN350	K-Factor	1.0915 - 1.0915
Serial number	DB0BB816000	Zero point	-2
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	11.05.2023	Verification time	13:19

Verification Flow end value (100 %): 33250.613 m3/d
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	1662.531 m3/d (5%)	1.50 %	0.32 %
✓		3325.061 m3/d (10.0%)	1.00 %	0.30 %
✓		16625.307 m3/d (50.0%)	0.60 %	0.02 %
✓		33250.613 m3/d (100%)	0.55 %	0.01 %
	Current Output 1			
✓		4.000 mA (0%)	0.05 mA	0.002 mA
✓		4.800 mA (5%)	0.05 mA	0.001 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.011 mA
✓		12.000 mA (50.0%)	0.05 mA	0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.013 mA
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	29.600 ms	0.000..52.500 ms	30.530 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.000 mV	3.273 mV

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FITRAS-1
Device type	PROMAG 50 W DN350	K-Factor	1.0915 - 1.0915
Serial number	DB0BB816000	Zero point	-2
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.04.02
Verification date	11.05.2023	Verification time	13:19

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 m3/d	23000.00 m3/d		

Actual System Ident.

123.0

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA
 Customer

Order code
 PROLINE T_MASS 65 4.2 inch

Device type
 F70AC502000

Serial number
 V1.01.02

Software Version Transmitter
 09.05.2023

Verification date

ORILLIA WWTP

Plant
 FIT-102

Tag Name
 0 - 0

K-Factor
 0

Zero point

Software Version I/O-Module
 11:55

Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 2.00 %
Heat Power Generation	Passed	1.0 mW
Ambient Resistance Test	Passed	1.0 Ohm
Heater Resistance Test	Passed	1.0 Ohm
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	0.5 C

FieldCheck Details
 551032

Production number
 1.07.10

Software Version
 04/2023

Last Calibration Date

Simubox Details
 8806304

Production number
 0.00.03

Software Version
 04/2023

Last Calibration Date

09.05.2023
 Date


 Operator's Sign

Inspector's Sign

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-102
Device type	PROLINE T_MASS 65 4.2 inch	K-Factor	0 - 0
Serial number	F70AC502000	Zero point	0
Software Version Transmitter	V1.01.02	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	11:55

Verification Flow end value (100 %): 82729.758 kg/d

Application: Gas mixture

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	4136.488 kg/d	2.00 %	-0.37 %
✓		8272.976 kg/d	2.00 %	-0.20 %
✓		41364.879 kg/d	2.00 %	-0.04 %
✓		82729.758 kg/d	2.00 %	0.04 %
	Heat Power Generation			
✓		10.000 mW	1.0 mW	0.0255 mW
✓		20.000 mW	1.0 mW	0.0466 mW
✓		100.000 mW	1.0 mW	0.2073 mW
✓		200.000 mW	1.0 mW	0.4278 mW
	Ambient Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.02 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
	Heater Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.02 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
	Current Output 1			
✓		4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA	0.05 mA	-0.001 mA
✓		5.600 mA	0.05 mA	-0.001 mA
✓		12.000 mA	0.05 mA	-0.001 mA
✓		20.000 mA	0.05 mA	0.003 mA
—	Pulse Output 1	---	---	---
	Test Sensor	Sensor A // Sensor H (zero power)	Limit Value	Measured value
✓	Temperature Difference Amb. - Heater	36.4 C // 36.4 C	0.5 C	0.0378 C

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-102
Device type	PROLINE T_MASS 65 4.2 inch	K-Factor	0 - 0
Serial number	F70AC502000	Zero point	0
Software Version Transmitter	V1.01.02	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	11:55

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	COR. VOLUME FLOW	4-20 mA activ	0.0 Nm3/h	200.00 Nm3/h		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal xx/xx	OFF	---	---	---		

Actual System Ident.

0.0

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

Customer

Order code

PROLINE T_MASS 65 4.2 inch

Device type

F70AC602000

Serial number

V1.01.02

Software Version Transmitter

09.05.2023

Verification date

ORILLIA WWTP

Plant

FIT-101

Tag Name

0 - 0

K-Factor

0

Zero point

Software Version I/O-Module

12:48

Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 2.00 %
Heat Power Generation	Passed	1.0 mW
Ambient Resistance Test	Passed	1.0 Ohm
Heater Resistance Test	Passed	1.0 Ohm
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	0.5 C

FieldCheck Details

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8806304

Production number

0.00.03

Software Version

04/2023

Last Calibration Date

09.05.2023

Date



Operator's Sign

Inspector's Sign

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-101
Device type	PROLINE T_MASS 65 4.2 inch	K-Factor	0 - 0
Serial number	F70AC602000	Zero point	0
Software Version Transmitter	V1.01.02	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	12:48

Verification Flow end value (100 %): 82765.609 kg/d

Application: Gas mixture

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	4138.280 kg/d	2.00 %	-0.52 %
✓		8276.561 kg/d	2.00 %	-0.44 %
✓		41382.805 kg/d	2.00 %	-0.23 %
✓		82765.609 kg/d	2.00 %	-0.09 %
	Heat Power Generation			
✓		10.000 mW	1.0 mW	0.0422 mW
✓		20.000 mW	1.0 mW	0.0742 mW
✓		100.000 mW	1.0 mW	0.4099 mW
✓		200.000 mW	1.0 mW	0.8023 mW
	Ambient Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.00 Ohm
✓		100.0 Ohm	1.0 Ohm	0.01 Ohm
	Heater Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.00 Ohm
✓		100.0 Ohm	1.0 Ohm	0.01 Ohm
	Current Output 1			
✓		4.000 mA (0%)	0.05 mA	-0.004 mA
✓		4.800 mA	0.05 mA	0.001 mA
✓		5.600 mA	0.05 mA	0.000 mA
✓		12.000 mA	0.05 mA	-0.003 mA
✓		20.000 mA	0.05 mA	-0.006 mA
	Pulse Output 1			
—		---	---	---
	Test Sensor	Sensor A // Sensor H (zero power)	Limit Value	Measured value
✓	Temperature Difference Amb. - Heater	21.8 C // 21.9 C	0.5 C	0.0874 C

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-101
Device type	PROLINE T_MASS 65 4.2 inch	K-Factor	0 - 0
Serial number	F70AC602000	Zero point	0
Software Version Transmitter	V1.01.02	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	12:48

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	COR. VOLUME FLOW	4-20 mA activ	0.0 Nm3/h	200.00 Nm3/h		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal xx/xx	OFF	---	---	---		

Actual System Ident.

0.0

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA
 Customer

Order code
 PROMAG 50 P DN15

Device type
 6B026416000

Serial number
 V1.06.01

Software Version Transmitter
 11.05.2023

Verification date

ORILLIA WWTP
 Plant

Tag Name
 0.7686 - 0.7686

K-Factor
 -6

Zero point
 V1.04.00

Software Version I/O-Module
 13:00

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
 551032

Production number
 1.07.10

Software Version
 04/2023

Last Calibration Date

Simubox Details
 8714684

Production number
 1.00.01

Software Version
 04/2023

Last Calibration Date

11.05.2023

Date



Operator's Sign

Inspector's Sign

Overall results:

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

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

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

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	-----
Device type	PROMAG 50 P DN15	K-Factor	0.7686 - 0.7686
Serial number	6B026416000	Zero point	-6
Software Version Transmitter	V1.06.01	Software Version I/O-Module	V1.04.00
Verification date	11.05.2023	Verification time	13:00

Verification Flow end value (100 %): 42.411 l/m
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	2.121 l/m (5%)	1.50 %	0.44 %
✓		4.241 l/m (10.0%)	1.00 %	0.17 %
✓		21.206 l/m (50.0%)	0.60 %	0.15 %
✓		42.411 l/m (100%)	0.55 %	0.17 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.001 mA
✓		4.800 mA (5%)	0.05 mA	0.000 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.014 mA
✓		12.000 mA (50.0%)	0.05 mA	0.000 mA
✓		20.000 mA (100%)	0.05 mA	0.003 mA
—	Pulse Output 1	---	---	---
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	2.600 ms	0.000..8.700 ms	3.601 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.000 mV	9.863 mV

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	-----
Device type	PROMAG 50 P DN15	K-Factor	0.7686 - 0.7686
Serial number	6B026416000	Zero point	-6
Software Version Transmitter	V1.06.01	Software Version I/O-Module	V1.04.00
Verification date	11.05.2023	Verification time	13:00

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/m	5.00 l/m		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	0.000 m3/P	Passive/Positive	100.00 ms		

Actual System Ident.

123.0



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8310
Part No.: 8344808
Serial No.: ARML 0348
Tag No: Channel 02
Job Location: Primary Building Main Area

Service Information
Date: May 8, 2023
Report No: CO1452-2305-11
Job No: CO1452-2305

Sensor Details
Gas Type: Methane(CH4)
Sensor Serial No.: N/A
Sensor Part No.: N/A
Sensor Range: 0-100% LEL

Gas Details
Unit: %(LEL)
Gas Range: 0-50% LEL
Current Output: 4-20 mA
4- 20mA Set Point: 100%LEL
Alarm 1 Set Point: 10%LEL
Alarm 2 Set Point: 20%LEL

Inst. Reading	AS FOUND	AS LEFT
GAS (%LEL)	0	0

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (%LEL)	UUT Display (%LEL)	Deviation (%LEL)	Test Result
Zero	0	0	0	Passed
Span	50	49	-1	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4(50% LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8100
Part No.: 8344404
Serial No.: ARND 1512
Tag No: Channel 01
Job Location: Primary Building Main Area

Service Information
Date: May 8, 2023
Report No: CO1452-2305-12
Job No: CO1452-2305

Sensor Details
Gas Type: Hydrogen Sulfide(H2S)
Sensor Serial No.: ARNE 0059
Sensor Part No : 6810435
Sensor Range: 0- 100 PPM

Gas Details
Unit: PPM
Gas Range: 0-25 PPM
Current Output: 4-20 mA
4- 20mA Set Point: 0-50 PPM
Alarm 1 Set Point: 5 PPM
Alarm 2 Set Point: 10 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0.0	0.0

Maintenance Checklist		Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	25.0	22.0	-3.0	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	H2S(25PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8310
Part No.: 8344808
Serial No.: ARMM 0596
Tag No: Channel 04
Job Location: Primary Building Tunnel Area

Service Information
Date: May 8, 2023
Report No: CO1452-2305-13
Job No: CO1452-2305

Sensor Details
Gas Type: Methane(CH4)
Sensor Serial No.: N/A
Sensor Part No: N/A
Sensor Range: 0-100% LEL

Gas Details
Unit: %(LEL)
Gas Range: 0-50% LEL
Current Output: 4-20 mA
4-20mA Set Point: 100%LEL
Alarm 1 Set Point: 10%LEL
Alarm 2 Set Point: 20%LEL

Inst. Reading	AS FOUND	AS LEFT
GAS (%LEL)	0	0

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (%LEL)	UUT Display (%LEL)	Deviation (%LEL)	Test Result
Zero	0	0	0	Passed
Span	50	53	3	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4(50% LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8100
Part No.: 8344404
Serial No.: ARND1530
Tag No: Channel 03
Job Location: Primary Building Main Area

Service Information
Date: May 8, 2023
Report No: CO1452-2305-14
Job No: CO1452-2305

Sensor Details
Gas Type: Hydrogen Sulfide(H2S)
Sensor Serial No.: ARNC 0595
Sensor Part No : 6810435
Sensor Range: 0-100 PPM

Gas Details
Unit: PPM
Gas Range: 0-25 PPM
Current Output: 4-20 mA
4- 20mA Set Point: 0-50 PPM
Alarm 1 Set Point: 5 PPM
Alarm 2 Set Point: 10 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0.0	0.0

Maintenance Checklist				Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	25.0	23.6	-1.4	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	H2S(25PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8310
Part No.: 8344808
Serial No.: ARMM 0602
Tag No: Channel 01
Job Location: Digester Bldg Condensate Room

Service Information
Date: May 8, 2023
Report No: CO1452-2305-15
Job No: CO1452-2305

Sensor Details
Gas Type: Methane(CH4)
Sensor Serial No.: N/A
Sensor Part No.: N/A
Sensor Range: 0-100% LEL

Gas Details
Unit: %(LEL)
Gas Range: 0-50% LEL
Current Output: 4-20 mA
4- 20mA Set Point: 100%LEL
Alarm 1 Set Point: 10%LEL
Alarm 2 Set Point: 20%LEL

Inst. Reading	AS FOUND	AS LEFT
GAS (%LEL)	0	0

Maintenance Checklist		Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (%LEL)	UUT Display (%LEL)	Deviation (%LEL)	Test Result
Zero	0	0	0	Passed
Span	50	52	2	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4(50%LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener Street, Orillia,
ON, L3V 6Z9

Device Information
Make: Draeger
Model: Polytron 8100
Part No.: 8344404
Serial No.: ARND 1538
Tag No: Channel 03
Job Location: Digester Bldg Condensate Room

Service Information
Date: May 8, 2023
Report No: CO1452-2305-16
Job No: CO1452-2305

Sensor Details
Gas Type: Hydrogen Sulfide(H2S)
Sensor Serial No.: ARNC 0563
Sensor Part No : 6810435
Sensor Range: 0-100 PPM

Gas Details
Unit: PPM
Gas Range: 0-25 PPM
Current Output: 4-20 mA
4- 20mA Set Point: 0-50 PPM
Alarm 1 Set Point: 5 PPM
Alarm 2 Set Point: 10 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0.0	0.0

Maintenance Checklist				Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK		

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	25.0	24.1	-0.9	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	H2S(25PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name:	City of Orillia	Site/Plant Address:	40 Kitchener Street, Orillia,
Plant Name:	Orillia WWTP		ON, L3V 6Z9

Device Information	
Make:	Draeger
Model:	Polytron 8100
Part No.:	8344404
Serial No.:	ARND 1520
Tag No:	Channel 02
Job Location:	Digester Bldg Condensate Room

Service Information	
Date:	May 8, 2023
Report No:	CO1452-2305-17
Job No:	CO1452-2305

Sensor Details	
Gas Type	O2
Sensor Part No :	6809630
Sensor Serial No.:	ARND 0773
Sensor Range:	0-25% (VOL)

Gas Details	
Unit:	% (VOL)
Gas Range:	0 - 21.00% (VOL)
Current Output:	4-20 mA
4- 20mA Set Point	0 - 25.00% (VOL)
Alarm 1 Set Point	19.50% (VOL)
Alarm 2 Set Point	19.00% (VOL)

Inst. Reading	AS FOUND	AS LEFT
GAS (%VOL)	20.9	20.9

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	


Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (%VOL)	UUT Display (%VOL)	Deviation (%VOL)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	21.0	20.8	-0.2	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	O2 (21% VOL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	<input checked="" type="checkbox"/> Passed	<input type="checkbox"/> Fail	<input type="checkbox"/> Not Verified
----------------------	---------------------------------------------------	--------------------------------------	----------------------------------------------

Overall Remarks:	Measurement Works within Specification. Calibration Test Passed.
------------------	---------------------------------------------------------------------

Service Technician :	Tushar Patel	Stamp/Signature	
Printed Date:	May 8, 2023		

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

FOREST AVENUE

Customer

Plant

FIT-01

Order code

PROMAG 53 W DN100

Tag Name

1.2518 - 1.2518

Device type

MA0ADF16000

K-Factor

-3

Serial number

V2.03.00

Zero point

V1.06.00

Software Version Transmitter

11.05.2023

Software Version I/O-Module

12:29

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

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8714684

Production number

1.00.01

Software Version

04/2023

Last Calibration Date

11.05.2023



Date

Operator's Sign

Inspector's Sign

Overall results:

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

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

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

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-01
Device type	PROMAG 53 W DN100	K-Factor	1.2518 - 1.2518
Serial number	MA0ADF16000	Zero point	-3
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.06.00
Verification date	11.05.2023	Verification time	12:29

Verification Flow end value (100 %): 31.416 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	1.571 l/s (5%)	1.50 %	0.25 %
✓		3.142 l/s (10.0%)	1.00 %	0.32 %
✓		15.708 l/s (50.0%)	0.60 %	0.01 %
✓		31.416 l/s (100%)	0.55 %	-0.01 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.001 mA
✓		4.800 mA (5%)	0.05 mA	0.001 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.013 mA
✓		12.000 mA (50.0%)	0.05 mA	0.002 mA
✓		20.000 mA (100%)	0.05 mA	0.009 mA
—	Pulse Output 1	---	---	---
		Start value	Limits range	Measured value
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	7.953 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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-01
Device type	PROMAG 53 W DN100	K-Factor	1.2518 - 1.2518
Serial number	MA0ADF16000	Zero point	-3
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.06.00
Verification date	11.05.2023	Verification time	12:29

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	18.93 l/s		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	2.000 gal/P	Passive/Positive	100.00 ms		

Actual System Ident.

123.0



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT - KHRONE ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener street,
Orillia, ON L3V6Z9

Device Information

Make: Khrono
Model: Enviromag 2100
Order Code: NA
Serial No.: C17501447
Tag: NA
Job Location: Filter 2

Service Information

Date: May 8, 2023
Report No: CO1452-2305-21
Job No: CO1452-2305

Flow Details

Unit: gal/min
Flow Range: 0-1260
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 1260

Sensor Details

Line size: DN150mm / 6 Inch
GK: NA
GKL: 6.2426
Mounting: Compact

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	NA	NA
FLOW (gal/min)	700	0

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results

Set-Point as Per Calibration KIT	Calculated Flow (gal/min)	Calculated O/P (mA)	UUT Display (gal/min)	UUT Measured Output (mA)	Deviation (gal/min)
0	0.00	4.00	0.00	4.00	0.00
A	133.24	5.69	132.00	5.64	-1.24
B	266.48	7.38	266.00	7.43	-0.48
C	532.96	10.77	533.00	10.84	0.04

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	N/A
Manufacturer:	Khrono	Fluke	N/A
Model No:	GS8B	179	N/A

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.

Service Technician : Tushar Patel

Stamp/Signature

Printed Date: May 8, 2023



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT - KHRONE ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Orillia WWTP

Site/Plant Address: 40 Kitchener street,
Orillia, ON L3V6Z9

Device Information
Make: Khrone
Model: Enviromag 2100
Order Code: NA
Serial No.: C17500974
Tag: NA
Job Location: Filter 1

Service Information
Date: May 8, 2023
Report No: CO1452-2305-22
Job No: CO1452-2305

Sensor Details
Line size: DN150mm / 6 Inch
GK: NA
GKL: 6.2891
Mounting: Compact

Flow Details
Unit: gal/min
Flow Range: 0-1260
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 1260

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	NA	NA
FLOW (gal/min)	0	0

Maintenance Checklist	OK	NOT OK
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK

Remarks

Instrument Test Information and Results

Set-Point as Per Calibration KIT	Calculated Flow (gal/min)	Calculated O/P (mA)	UUT Display (gal/min)	UUT Measured Output (mA)	Deviation (gal/min)
0	0.00	4.00	0.00	3.99	0.00
A	134.23	5.70	133.00	5.65	-1.23
B	268.46	7.41	269.00	7.45	0.54
C	536.93	10.82	536.00	10.79	-0.93

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	N/A
Manufacturer:	Khrone	Fluke	N/A
Model No:	GS8B	179	N/A

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

ORILLIA WWTP

Customer

Plant

Order code

FIT-90

PROLINE T_MASS 65 10.0 inch

Tag Name

0 - 0

Device type

K-Factor

N10D6F02000

0

Serial number

Zero point

V1.01.04

Software Version Transmitter

Software Version I/O-Module

09.05.2023

14:24

Verification date

Verification time

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 2.00 %
Heat Power Generation	Passed	1.0 mW
Ambient Resistance Test	Passed	1.0 Ohm
Heater Resistance Test	Passed	1.0 Ohm
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	0.5 C

FieldCheck Details

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8806304

Production number

0.00.03

Software Version

04/2023

Last Calibration Date

09.05.2023

Date



Operator's Sign

Inspector's Sign

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-90
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6F02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	14:24

Verification Flow end value (100 %): 19540.188 kg/h

Application: Air

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	977.009 kg/h	2.00 %	-0.09 %
✓		1954.019 kg/h	2.00 %	0.01 %
✓		9770.094 kg/h	2.00 %	0.14 %
✓		19540.188 kg/h	2.00 %	0.29 %
✓	Heat Power Generation	10.000 mW	1.0 mW	0.0272 mW
✓		20.000 mW	1.0 mW	0.0570 mW
✓		100.000 mW	1.0 mW	0.3136 mW
✓		200.000 mW	1.0 mW	0.6018 mW
✓	Ambient Resistance Test	137.0 Ohm	1.0 Ohm	0.04 Ohm
✓		100.0 Ohm	1.0 Ohm	0.01 Ohm
✓	Heater Resistance Test	137.0 Ohm	1.0 Ohm	0.04 Ohm
✓		100.0 Ohm	1.0 Ohm	0.03 Ohm
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA	0.05 mA	-0.001 mA
✓		5.600 mA	0.05 mA	0.000 mA
✓		12.000 mA	0.05 mA	-0.005 mA
✓		20.000 mA	0.05 mA	-0.011 mA
—	Pulse Output 1	---	---	---
	Test Sensor	Sensor A // Sensor H (zero power)	Limit Value	Measured value
✓	Temperature Difference Amb. - Heater	54.4 C // 54.4 C	0.5 C	0.0116 C

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-90
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6F02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	14:24

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	COR. VOLUME FLOW	4-20 mA activ	0.0 Nm3/h	8000.00 Nm3/h		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal xx/xx	OFF	---	---	---		

Actual System Ident.

0.0

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

Customer

Order code

PROLINE T_MASS 65 10.0 inch

Device type

N10D6C02000

Serial number

V1.01.04

Software Version Transmitter

09.05.2023

Verification date

ORILLIA WWTP

Plant

FIT-292

Tag Name

0 - 0

K-Factor

0

Zero point

Software Version I/O-Module

13:37

Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 2.00 %
Heat Power Generation	Passed	1.0 mW
Ambient Resistance Test	Passed	1.0 Ohm
Heater Resistance Test	Passed	1.0 Ohm
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	0.5 C

FieldCheck Details

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8806304

Production number

0.00.03

Software Version

04/2023

Last Calibration Date

09.05.2023

Date



Operator's Sign

Inspector's Sign

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-292
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6C02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	13:37

Verification Flow end value (100 %): 19536.109 kg/h

Application: Air

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	976.805 kg/h	2.00 %	0.47 %
✓		1953.611 kg/h	2.00 %	0.39 %
✓		9768.055 kg/h	2.00 %	0.64 %
✓		19536.109 kg/h	2.00 %	0.79 %
	Heat Power Generation			
✓		10.000 mW	1.0 mW	0.0195 mW
✓		20.000 mW	1.0 mW	0.0492 mW
✓		100.000 mW	1.0 mW	0.2260 mW
✓		200.000 mW	1.0 mW	0.4670 mW
	Ambient Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.05 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
	Heater Resistance Test			
✓		137.0 Ohm	1.0 Ohm	0.05 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
	Current Output 1			
✓		4.000 mA (0%)	0.05 mA	-0.004 mA
✓		4.800 mA	0.05 mA	0.000 mA
✓		5.600 mA	0.05 mA	0.001 mA
✓		12.000 mA	0.05 mA	-0.003 mA
✓		20.000 mA	0.05 mA	-0.011 mA
	Pulse Output 1			
—		---	---	---
	Test Sensor	Sensor A // Sensor H (zero power)	Limit Value	Measured value
✓	Temperature Difference Amb. - Heater	58.5 C // 58.5 C	0.5 C	0.0377 C

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-292
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6C02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	13:37

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	COR. VOLUME FLOW	4-20 mA activ	0.0 Nm3/h	8000.00 Nm3/h		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal xx/xx	OFF	---	---	---		

Actual System Ident.

0.0

Flowmeter Verification Certificate Transmitter

CITY OF ORILLIA

ORILLIA WWTP

Customer

Plant

Order code

FIT-293

PROLINE T_MASS 65 10.0 inch

Tag Name

0 - 0

Device type

K-Factor

N10D6E02000

0

Serial number

Zero point

V1.01.04

Software Version Transmitter

Software Version I/O-Module

09.05.2023

13:16

Verification date

Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 2.00 %
Heat Power Generation	Passed	1.0 mW
Ambient Resistance Test	Passed	1.0 Ohm
Heater Resistance Test	Passed	1.0 Ohm
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	0.5 C

FieldCheck Details

551032

Production number

1.07.10

Software Version

04/2023

Last Calibration Date

Simubox Details

8806304

Production number

0.00.03

Software Version

04/2023

Last Calibration Date

09.05.2023

Date



Operator's Sign

Inspector's Sign

FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-293
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6E02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	13:16

Verification Flow end value (100 %): 19519.092 kg/h

Application: Air

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	975.955 kg/h	2.00 %	-0.11 %
✓		1951.909 kg/h	2.00 %	-0.01 %
✓		9759.546 kg/h	2.00 %	0.05 %
✓		19519.092 kg/h	2.00 %	0.14 %
✓	Heat Power Generation	10.000 mW	1.0 mW	0.0319 mW
✓		20.000 mW	1.0 mW	0.0640 mW
✓		100.000 mW	1.0 mW	0.2948 mW
✓		200.000 mW	1.0 mW	0.5720 mW
✓	Ambient Resistance Test	137.0 Ohm	1.0 Ohm	0.04 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
✓	Heater Resistance Test	137.0 Ohm	1.0 Ohm	0.05 Ohm
✓		100.0 Ohm	1.0 Ohm	0.02 Ohm
✓	Current Output 1	4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA	0.05 mA	0.000 mA
✓		5.600 mA	0.05 mA	0.000 mA
✓		12.000 mA	0.05 mA	-0.004 mA
✓		20.000 mA	0.05 mA	-0.010 mA
—	Pulse Output 1	---	---	---
	Test Sensor	Sensor A // Sensor H (zero power)	Limit Value	Measured value
✓	Temperature Difference Amb. - Heater	49.1 C // 49.2 C	0.5 C	0.0351 C

Legend of symbols

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

FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT-293
Device type	PROLINE T_MASS 65 10.0 inch	K-Factor	0 - 0
Serial number	N10D6E02000	Zero point	0
Software Version Transmitter	V1.01.04	Software Version I/O-Module	
Verification date	09.05.2023	Verification time	13:16

Curent Output	Assign	Current Range	Value 0_4mA	Value 20 mA		
Terminal 26/27	COR. VOLUME FLOW	4-20 mA activ	0.0 Nm3/h	8000.00 Nm3/h		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal xx/xx	OFF	---	---	---		

Actual System Ident.

0.0



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: James SPS

Site/Plant Address: 125 James street West
Orillia, ON, L3V 5X6

Device Information

Make: Khrone
Model: IFC 090F
Order Code: N/A
Serial No.: A0658612
Tag: FIT01
Job Location: Sludge Unloading

Service Information

Date: May 11, 2023
Report No: CO1452-2305-45
Job No: CO1452-2305

Sensor Details

Line size: 100 mm 4 inch
GK: 2.5545
Mounting: Remote

Flow Details

Unit: L/SEC
Flow Range: 63
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 63

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (L)	303.11E6	303.11E6
FLOW (L/SEC)	-2	-1

Maintenance Checklist

Remarks

Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK

Instrument Test Information and Results

Set-Point as Per Calibration KIT	Calculated Flow (l/sec)	Calculated O/P (mA)	UUT Display (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.02	4.02	-0.02
A	3.06	4.78	3.00	4.74	0.06
B	6.12	5.55	6.00	5.52	0.12
C	12.23	7.11	12.00	7.02	0.23
D	30.58	11.77	30.00	11.62	0.58
E	61.15	19.53	61.00	19.44	0.15

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Khrone	Fluke	NA
Model No:	GS8B	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel

Stamp/Signature



Printed Date: May 11, 2023



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information
Make: Draeger
Model: Polytron 8000
Part No.: 4544404
Serial No.: ERHB1761
Tag No: AIT-CO
Job Location: Wet Well

Service Information
Date: May 11, 2023
Report No: CO1452-2305-46
Job No: CO1452-2305

Sensor Details
Gas Type: Carbon Monoxide (CO)
Sensor Part No : 6812675
Sensor Serial No.: ARFN 0454
Sensor Range: 0-300 PPM

Gas Details
Unit: PPM
Gas Range: 0-250 PPM
Current Output: 4-20 mA
4-20mA Set Point: 0-300 PPM
Alarm 1 Set Point: 30 PPM
Alarm 2 Set Point: 99.8 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0	0

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0	0	0	Passed
Span	250	247	-3	Passed


Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CO(50 PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 11, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information

Make: Draeger
Model: Polytron 8000
Part No.: 4544404
Serial No.: ERHB1175
Tag No: AIT-CH4
Job Location: Wet Well

Service Information

Date: May 11, 2023
Report No: CO1452-2305-47
Job No: CO1452-2305

Gas Details

Unit: % LEL
Gas Range: 0 - 50% LEL
Current Output: 4-20 mA
4- 20mA Set Point: 0-50% LEL
Alarm 1 Set Point: 10%LEL
Alarm 2 Set Point: 20%LEL

Sensor Details

Gas Type: Methane (CH4)
Sensor Part No : N/A
Sensor Serial No.: N/A
Sensor Range: 0-100%LEL

Inst. Reading	AS FOUND	AS LEFT
GAS (%LEL)	<u>0</u>	<u>0</u>

Maintenance Checklist

Remarks

Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input type="checkbox"/> OK	<input checked="" type="checkbox"/> NOT OK	Transmitter should be installed at Eye level

Instrument Test Information and Results

Calibration-Point	Calibrated Gas Value (% LEL)	UUT Display (% LEL)	Deviation (% LEL)	Test Result
Zero	0	0	0	Passed
Span	50	49	-1	Passed

Information of Gas used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4 (50% LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Transmitter need to be relocate at eye level in order to perform calibration easily.
Calibration Test Passed.

Service Technician : Tushar Patel

Stamp/Signature

Printed Date: May 11, 2023

End of Report

Version: 20-01



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name:	City of Orillia	Site/Plant Address:	125 James Street West
Plant Name:	James St SPS		Orillia, ON, L3V 5X6

Device Information	
Make:	Draeger
Model:	Polytron 8000
Part No.:	4544404
Serial No.:	ERHB 1265
Tag No:	AIT-H2S
Job Location:	Wet Well

Service Information	
Date:	May 11, 2023
Report No:	CO1452-2305-48
Job No:	CO1452-2305

Sensor Details	
Gas Type	Hydrogen Sulfide (H2S)
Sensor Part No :	6809610
Sensor Serial No.:	ARFM 0390
Sensor Range:	0-50 PPM

Gas Details	
Unit:	PPM
Gas Range:	0-25 PPM
Current Output:	4-20 mA
4-20mA Set Point	0-50 PPM
Alarm 1 Set Point	10 PPM
Alarm 2 Set Point	20 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0.0	0.0

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	25.0	23.8	-1.2	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	H2S (25 PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	<input checked="" type="checkbox"/> Passed	<input type="checkbox"/> Fail	<input type="checkbox"/> Not Verified
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Overall Remarks:	Measurement Works within Specification. Calibration Test Passed.
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Service Technician :	Tushar Patel	Stamp/Signature
Printed Date:	May 11, 2023	



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information
Make: Draeger
Model: Polytron 8000
Part No.: 4544404
Serial No.: ERHB1771
Tag No: AIT-O2
Job Location: Wet Well

Service Information
Date: May 11, 2023
Report No: CO1452-2305-49
Job No: CO1452-2305

Sensor Details
Gas Type: Oxygen (O2)
Sensor Part No: 6809630
Sensor Serial No.: ARHB 0470
Sensor Range: 0-25% (VOL)

Gas Details
Unit: % (VOL)
Gas Range: 0 - 21% (VOL)
Current Output: 4-20 mA
4- 20mA Set Point: 0-21% (VOL)
Alarm 1 Set Point: 19% (VOL)
Alarm 2 Set Point: 23% (VOL)

Inst. Reading	AS FOUND	AS LEFT
GAS (%VOL)	20.9	20.9%

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (%VOL)	UUT Display (%VOL)	Deviation (%VOL)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	21.0	20.9	-0.1	Passed


Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	O2 (21% VOL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 11, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information
Make: MSA
Model: Ultima XE
Part No.: NA
Serial No.: K06-2285771-40-001
Tag No: AIT-04
Job Location: Septage Receival

Service Information
Date: May 11, 2023
Report No: CO1452-2305-50
Job No: CO1452-2305

Sensor Details
Gas Type: Carbon Monoxide (CO)
Sensor Part No : N/A
Sensor Serial No.: N/A
Sensor Range: 0-100 PPM

Gas Details
Unit: PPM
Gas Range: 0-50 PPM
Current Output: 4-20 mA
4- 20mA Set Point: 0-60 PPM
Alarm 1 Set Point: 20 PPM
Alarm 2 Set Point: 25 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	1	Span Cal Fault

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0	0	0	Failed
Span	50	0	-50	Failed


Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CO
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: Passed Fail Not Verified

Overall Remarks: Sensor found faulty. Calibration Test Failed. Faulty sensor need to be replaced

Service Technician : Tushar Patel
Printed Date: May 11, 2023

Stamp/Signature 



IndusControl Inc.
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VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information
Make: MSA
Model: Ultima XE
Part No.: NA
Serial No.: K06-2285771-40-001
Tag No: AIT-03
Job Location: Septage Receival

Service Information
Date: May 11, 2023
Report No: CO1452-2305-51
Job No: CO1452-2305

Sensor Details
Gas Type: Methane (CH4)
Sensor Part No: N/A
Sensor Serial No.: N/A
Sensor Range: 0-100% LEL

Gas Details
Unit: % LEL
Gas Range: 0 - 50% LEL
Current Output: 4-20 mA
4-20mA Set Point: 0-100% LEL
Alarm 1 Set Point: 8% LEL
Alarm 2 Set Point: 10% LEL

Inst. Reading	AS FOUND	AS LEFT
GAS (%LEL)	3	0

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (% LEL)	UUT Display (% LEL)	Deviation (% LEL)	Test Result
Zero	0	0	0	Passed
Span	50	48	-2	Passed


Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4 (50% LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.
Sensor is ageing & its sensitivity is low ,sensor need to be replaced in future.

Service Technician : Tushar Patel
Printed Date: May 11, 2023

Stamp/Signature 



IndusControl Inc.
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VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: James St SPS

Site/Plant Address: 125 James Street West
Orillia, ON, L3V 5X6

Device Information
Make: MSA
Model: Ultima XE
Part No.: NA
Serial No.: K06-2285771-30-001
Tag No: AIT-02
Job Location: Septage Receival

Service Information
Date: May 11, 2023
Report No: CO1452-2305-52
Job No: CO1452-2305

Sensor Details
Gas Type: Hydrogen Sulfide (H2S)
Sensor Part No : N/A
Sensor Serial No.: N/A
Sensor Range: 0-100 PPM

Gas Details
Unit: PPM
Gas Range: 0-25 PPM
Current Output: 4-20 mA
4- 20mA Set Point: 0-40 PPM
Alarm 1 Set Point: 4 PPM
Alarm 2 Set Point: 5 PPM

Inst. Reading	AS FOUND	AS LEFT
GAS (PPM)	0.0	0.0

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (PPM)	UUT Display (PPM)	Deviation (PPM)	Test Result
Zero	0.0	0.0	0.0	Passed
Span	25.0	28.0	3.0	Passed


Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	H2S (25 PPM)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 11, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Bayview SPS

Site/Plant Address: 406 Bayview park way,
Orillia ON, L3V 6Z9

Device Information
Make: Fisher & Porter
Model: 50XM1000
Order Code: N/A
Serial No.: 9511160559
Tag: FIT01
Job Location: Wet well flow

Service Information
Date: May 9, 2023
Report No: CO1452-2305-26
Job No: CO1452-2305

Flow Details
Unit: m3/day
Flow Range: 6000
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 6000

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (L)	708066	713053
FLOW (L/SEC)	24.6800	0.0000

Maintenance Checklist		Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Flow Input (%)	Calculated Flow (m3/day)	Calculated O/P (mA)	UUT Display (m3/day)	UUT Measured Output (mA)	Deviation (m3/day)
0.00	0.00	4.00	0.03	4.02	-0.03
25.00	1500.00	8.00	1500.78	8.05	-0.78
50.00	3000.00	12.00	2999.76	11.95	0.24
75.00	4500.00	16.00	4500.89	16.12	-0.89
100.00	6000.00	20.00	6000.98	20.09	-0.98

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 2
Device Description:	Electrical Multimeter	Multifunction Process Calibrator	NA
Manufacturer:	Fluke	Extech	NA
Model No:	179	PRC30	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel

Stamp/Signature 

Printed Date: May 9, 2023



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT OPEN CHANNEL FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Bayview SPS

Site/Plant Address: 406 Bayview park way,
Orillia ON, L3V 6Z9

Device Information
Make: Milltronics
Model: Multiranger OCM111
Order Code: N/A
Serial No.: 12861339
Tag: FIT02
Job Location: Reservoir flow

Service Information
Date: May 9, 2023
Report No: CO1452-2305-27
Job No: CO1452-2305

Flow Details
Unit: L/SEC
Flow Range: 5
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 5

Inst. Reading	AS FOUND	AS LEFT
Totalizer	422105	422105

Maintenance Checklist		Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Input (%)	Calculated Flow (l/sec)	Calculated Input (mA)	O/P Flow on Scada (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.03	4.03	-0.03
25	1.25	8.00	1.27	8.05	-0.02
50	2.50	12.00	2.49	11.97	0.01
75	3.75	16.00	3.77	16.09	-0.02
100	5.00	20.00	4.98	19.97	0.02

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	Multifunction Process Calibrator	NA
Manufacturer:	Fluke	Extech	NA
Model No:	179	PRC30	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel
Printed Date: May 9, 2023

Stamp/Signature 



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Champlain SPS

Site/Plant Address: 25 Mulcahy court,
Orillia, ON L3V8B3

Device Information
Make: Rosemount
Model: 8712DR12N0M4
Order Code: N/A
Serial No.: 292635
Tag: FIT1000
Job Location: Champlain SPS

Service Information
Date: May 8, 2023
Report No: CO1452-2305-28
Job No: CO1452-2305

Sensor Details
Line size: 300 mm12 inch
Flow Cal Tube No.: 11217051109020-05
Mounting: Remote

Flow Details
Unit: L/SEC
Flow Range: 500
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 500

Inst. Reading	AS FOUND	AS LEFT
span(%)	0.0	0.0
FLOW (L/SEC)	0.0	0.0

Maintenance Checklist	Remarks
Visual Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Test-Point as Per Calibration KIT	Calculated Flow (FPS)	Calculated O/P (mA)	UUT Display (FPS)	UUT Measured Output (mA)	Deviation (FPS)
0.00	0.00	4.00	0.02	4.02	-0.02
3.00	3.00	5.60	3.02	5.62	-0.02
10.00	10.00	9.33	9.99	9.31	0.01
30.00	30.00	20.00	30.02	20.03	-0.02

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Rosemount	Fluke	NA
Model No:	8714D	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Tushar Patel Stamp/Signature

Printed Date: May 8, 2023



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT GAS DETECTOR/ANALYSER

Customer Name: City of Orillia
Plant Name: Champlain SPS

Site/Plant Address: 24 Mulcahy Ct, Orillia,
ON, L3V 8B3

Device Information
Make: MSA
Model: Ultima XE
Serial No.: E10-3355355-40-003
Part No.: N/A
Tag No.: N/A
Job Location: Dry Pit 'A' CH4

Service Information
Date: May 8, 2023
Report No: CO1452-2305-29
Job No: CO1452-2305

Sensor Details
Gas Type: Methane (CH4)
Sensor Part No: N/A
Sensor Serial No.: N/A
Sensor Range: 0-100%LEL

Gas Details
Unit: % LEL
Gas Range: 0 - 50% LEL
Current Output: 4-20 mA
4-20mA Set Point: 0 - 50% LEL
Alarm 1 Set Point: 10%LEL
Alarm 2 Set Point: 20%LEL
Alarm 3 Set Point: 30%LEL
Inst. Reading:

AS FOUND	AS LEFT
0	0

GAS (%LEL)

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results				
Calibration-Point	Calibrated Gas Value (% LEL)	UUT Display (% LEL)	Deviation (% LEL)	Test Result
Zero	0	0	0	Passed
Span	50	47	-3	Passed

Information of Gas used for Verification of the Instruments		
Details	Tool/Kit 1	Tool/Kit 2
Device Description:	Zero Gas	Span Gas
Gas Type:	Zero Gas	CH4 (50% LEL)
Manufacturer:	Drager	Drager

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: Passed Fail Not Verified

Overall Remarks: Measurement Works within Specification.
Calibration Test Passed.

Service Technician : Tushar Patel
Printed Date: May 8, 2023

Stamp/Signature