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P.O. Box 728
Geraldton, Ontario.
POT 1M0
Fax: 807-854-0483

March 18, 2025

Ministry of the Environment Sault Ste. Marie Regional Office 70 Foster Drive Sault Ste. Marie ON P6A 6V4

Attention: Marc Roberge

Water Compliance Officer (A)

Re: 2024 Performance Report for Hornepayne Wastewater Treatment Plant

Attached is the 20234 Performance Report for the **Hornepayne Wastewater Treatment Plant** located in The Corporation of the Township of Hornepayne. This report has been completed in accordance with Condition No. 10(6) cited in *Certificate of Approval Number 4306-A8ANUC* dated March 23 2016 and issued to the Township of Hornepayne.

This report was prepared by the Ontario Clean Water Agency on behalf of the Township of Hornepayne based on information kept on record at the Hornepayne Wastewater plant, and, the report covers the period from January 1, 2024 to December 31, 2024.

Should you have any questions or comments in regards to this annual report, please do not hesitate to contact David Hoffman at 807-854-7142.

Yours truly,

Patrick Couture

Senior Operations Manager Ontario Clean Water Agency Northwestern Ontario Hub

Copy to: CAO/Clerk

Patrick Couture

Hornepayne Wastewater Operators

# 2024 Annual Report

Hornepayne Wastewater Treatment Plant

Prepared by the Ontario Clean Water Agency



### The Corporation of the Township of Hornepayne Sewage Treatment Plant 2024 Annual Report

#### INTRODUCTION

In accordance with the *Certificate of Approval Number 4306-A8ANUC* dated March 23 2016, section 10 (6), the Corporation of the Township of Hornepayne - Hornepayne Sewage Treatment Plant is required to prepare an annual summary. The 2024 annual facility performance report summarizes important information regarding the treatment quality of the effluent wastewater, analytical test results, relevant activities and maintenance operations of the Works. Some of this information was submitted via the quarterly upload of information, but is being presented again as part of the new Annual Report based on the calendar year.

### **DESCRIPTION OF WORKS**

Rated Capacity of Works 1364 m<sup>3</sup>/day

Service Area Township of Hornepayne

Service Population 980

Effluent Receiver Little Jackfish River

Major Process Extended Aeration Plant – Carrousel-type treatment

system

### EFFLUENT MONITORING AND RECORDING

Analytical tests to monitor the influent and effluent water quality on a monthly basis are conducted by a laboratory audited by the Canadian Association for Environmental Analytical Laboratories (CAEAL) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods. Weekly analysis is performed in-house in order to maintain the process. When these samples are split with the accredited laboratories, it confirms the procedure accuracy of the in-house testing.

### SAMPLING REQUIREMENTS

Samples of raw sewage and final effluent from the WWTP shall be collected and analyzed for the following parameters at the indicated frequencies.

### Raw Sewage Monitoring - Samples to be collected at the end of the grit channel

Parameters	Sample Type	Frequency
BOD <sub>5</sub>	Composite*	monthly
Total Suspended Solids	Composite*	monthly
Total Phosphorus	Composite*	monthly
Total Kjeldahl Nitrogen (TKN)	Composite*	monthly

<sup>\*</sup> Composite of three grab samples, taken at time intervals of at least six hours over a 24-hour sampling period.

## Final Effluent Monitoring - Samples to be collected at the V-notch at the end of the chlorine contact chamber

Parameters	Sample Type	Frequency
CBOD <sub>5</sub>	Composite*	Monthly
Total Suspended Solids	Composite*	Monthly
Total Phosphorus	Composite*	Monthly
Ammonia – Nitrogen(total)	Composite*	Monthly
E. Coli	Grab	Biweekly
Total Chlorine Residual	Grab	Weekly
рН	Grab	Weekly
Temperature	Grab	Weekly

<sup>\*</sup> Composite of three grab samples, taken at time intervals of at least six hours over a 24-hour sampling period.

### PLANT PERFORMANCE

### Effluent Limits as per C of A, condition 7

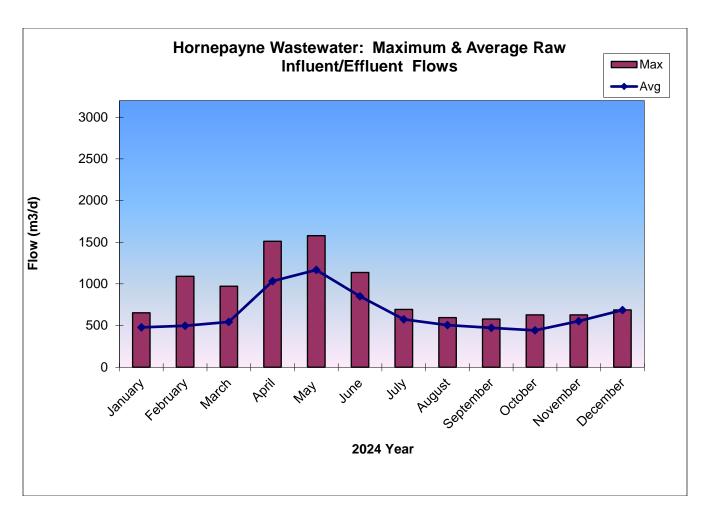
Effluent Parameter	Annual Average	Average Loading
	Concentration Limit	
$BOD_5$	25.0 mg/L	34.1 kg/day
Total Suspended Solids	25.0 mg/L	34.1 kg/day
pН	Between $6.0 - 9.5$ at all times	
E. Coli	200 organisms/100 ml	
	(monthly Geometric Mean Density)	

## Effluent Objectives (best effort) as per C of A, condition 6 (1)

Effluent Parameter	Concentration Objective	Loading Objective
$CBOD_5$	15.0 mg/L	20.5 kg/day
Total Suspended Solids	15.0 mg/L	20.5 kg/day
E. Coli	150 organisms/100 ml	
	(monthly Geometric Mean Density)	
pН	6.5- 8.5	

### **EFFLUENT FLOWS**

In order to review, at a glance, the performance of the WWTP, a graph has been prepared showing the average and maximum monthly effluent flows for the year; January to December 2024. The total effluent flows for this timeframe report as 232,217 m³, compared to 266,200 m³for the 2023 calendar year.



### **EFFLUENT SAMPLING**

In the reporting year 2024, CBOD<sub>5</sub> was analyzed and the average was 3.10 mg/L; this is well within the effluent limits imposed by the *Certificate of Approval* condition 6.1 of 25.0 mg/L. This also was within the objective limits of 15 mg/l

The annual average suspended solids concentrations for the effluent in 2024 was 5.27 mg/L. This parameter is likewise within the annual compliance level of 25.0 mg/L. This parameter has an objective value of 15 mg/l. The objective limit was achieved in 2024.

The plant compliance criteria states; the pH of the effluent shall be maintained between 6.0 and 9.5, inclusive, at all times. The average pH during this period was 7.26 with a high of 7.89 and a low of 6.71. The effluent met the limits or the objective levels of 6.5 to 8.5.

The effluent parameter includes a requirement to maintain the monthly geometric mean density of e-coli less than of 200 organisms per 100 ml. In 2024, the maximum monthly geometric mean density for e-coli was 73.48 organisms per 100 ml in the month of May. The effluent met the objective for E-coli in 2024.

#### **MAINTENANCE**

OCWA maintains a Work Management System (WMS), which is a comprehensive computer based maintenance program that is based on a proactive preventive approach. This includes running checks, weekly, monthly and annual maintenance, as required. A full report on all maintenance carried out in 2024 is available upon request.

There were no modifications made to the Hornepayne Sewage Plant as per Schedule B of the ECA. The Federal Regulation requiring the effluent to be below 0.02 mg/l chlorine residual came into effect in 2021. The facility used a temporary dechlorination system in the effluent channel to meet this regulatory requirement until a permanent solution is engineered and installed. The final effluent samples are collected after the dechlorination.

#### **OPERATIONAL ISSUES**

The Federal Regulation requiring the effluent to be below 0.02 mg/l chlorine residual came into effect in 2021. In 2024 the regulation was modified to 0.1 mg/l. The facility used a temporary dechlorination system in the effluent channel to meet this regulatory requirement until a permanent solution is engineered and installed. The collection of the final effluent samples are collected after the dechlorination.

The operators have determined the correct dosing of the dechlorination chemicals to meet the treatment requirements. The residual values collected after the dechlorination met the Federal requirements. The summary table of the residuals is appended to this report.

Beginning in February there was issues with the blowers for the plant. Blower #1 would not work and blower #2 was faulting out. Blower number 2 had a ground fault in the motor. The motor was repaired and replaced in service. Blower #1 had a new VFD installed and returned to service September 26. The airline to the aeration was also cleaned and debris was found in the line.

On March 20, the Spruce Street lift station lost a phase in the power supply. The lift station was pumped out and hauled to the Marathon lift station and reintroduced into the collection system. The phase was repaired by Hydro One and the lift station returned to service.

Two sewer mains were reported blocked through the year. The lines were flushed by Hearst Septic. Several lines in the municipality were flushed to correct the issues in the system.

### **CALIBRATIONS**

The owner shall maintain a continuous flow-measuring device to measure the flow rate within an accuracy of +/- 5% of actual rate of flow within the range of 10% to 100% of the full-scale reading of the measuring devices.

In 2024, calibration of the continuous measuring device was calibrated by Lakeside Process Controls; results attached. The units were within the required accuracy, as outlined in the criteria above.

#### SLUDGE SUMMARY

Sludge is hauled from the facility to the sludge drying beds site by the Hearst Septic. A summary of the sludge hauled for Hornepayne Sewage Treatment Plant is outlined in the following table.

Sludge Volume Hauled in 2024

Month	Total Volume( m3)
January	0
February	0
March	180
April	0
May	190
June	0
July	120
August	0
September	0
October	50
November	110
December	0
Total:	650

The sludge is disposed of in the Hornepayne Sludge Drying Beds. There is no expected change in the sludge handling methods or disposal areas for the WWTP in the coming year.

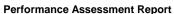
### COMPLAINTS/ENVIRONMENTAL INCIDENT

There were no complaints reported in 2024. There were two calls from residents concerning slow flowing sewage lines. These calls resulted in the mains being flushed to restore normal flows.

### **BY-PASS REPORTS**

There was no bypasses reported in 2024

## Performance Assessment Report 1<sup>st</sup> January – December 31<sup>st</sup> 2024



From 1/1/2024 to 12/31/2024 11:59:59 PM

1 / 2024 3/ 2024 4/ 2024 5/ 2024 6/ 2024 7/ 2024 8/ 2024 9/ 2024 10/ 2024 11/ 2024 12/ 2024 <--Total--> Raw Flow: Total - Influent m3/d 14,843.00 14,442.00 16,858.00 31,018.00 36,193.0 25,512.0 17,808.00 15,673.0 14,180.00 13,715.00 16,602.00 15,373.0 232,217.00 0.00 Raw Flow: Avg - Influent m3/d 478.81 498.00 543.81 1,033.93 1,167.5 850.4 574.45 505.58 472.67 442.42 553.40 495.9 1,364.00 Raw Flow: Max - Influent m³/d 654.00 1,091.00 972.00 1,511.00 1,579.00 1,138.00 694.00 596.00 578.00 628.00 629.00 688.0 0.00 Raw Flow: Count - Influent m³/d 31.00 31.00 30.00 31.00 30.00 31.00 0.00 31.0 29.00 31.00 30.0 31.00 30.00 366.00 Eff. Flow: Total - Effluent m3/d 14.843.0 14,442,00 16.858.00 31.018.00 36,193,00 25.512.0 17,808,00 15.673.0 14.180.00 13.715.00 16 602 00 15.373.00 232.217.00 0.00 Eff. Flow: Avg - Effluent m3/d 478 R 498 00 543.81 1.033.93 1.167.52 850.4 574.45 505.58 472.67 442.42 553.40 495 Q 634.4 Eff. Flow: Max - Effluent m³/d 654.0 1,091.00 972.00 1,579.00 1.138.0 694.00 596.0 578.00 628.00 629.00 688.0 1,579.00 0.00 1.511.00 31.00 30.00 31.00 0.00 Eff Flow: Count - Effluent m3/d 31.0 29.00 31.00 30.00 31.00 30.00 31.00 30.00 366.00 Carbonaceous Biochemical Oxygen Demand: CBOD Eff: Avg cBOD5 - Effluent mg/L Eff: # of samples of cBOD5 - Effluent 0.00 Loading: cBOD5 - Effluent kg/d Biochemical Oxygen Demand: BOD5 Raw: Avg BOD5 - Influent mg/L 0.00 Raw: # of samples of BOD5 - Influent Total Suspended Solids: TSS Raw: Avg TSS - Influent mg/L 68.7 36.70 39.30 12.0 58.00 116.00 49.00 72.1 0.00 Raw: # of samples of TSS - Influent 0.00 1.00 1.00 1.00 1.00 12.00 25.00 Fff: Avg TSS - Effluent mg/l 3.7 6.00 5.00 5.00 4.70 4.00 11.00 5.70 5.70 5.7 5.00 5.27 Eff: # of samples of TSS - Effluent 0.00 1.0 1.00 1.00 1.00 1.0 1.00 1.00 1.00 1.00 1.00 12.00 34.100 Loading: TSS - Effluent kg/d 1.77 2.988 5.982 5.893 6.655 4.84 2.872 2.528 0.804 2.212 2.601 1.984 90.09 85.50 Percent Removal: TSS - Influent % 94.61 93.33 84.47 52.50 95.05 91.38 97.57 95.61 95.95 91.84 88.99 0.00 Total Phosphorus: TP Raw: Avg TP - Influent mg/L Raw: # of samples of TP - Influent 0.58 Eff: Avg TP - Effluent mg/L

Nitrogen Series

Raw: Avg TKN - Influent mg/L Raw: # of samples of TKN - Influent Eff: Avg TAN - Effluent mg/L Eff: # of samples of TAN - Effluent Loading: TAN - Effluent kg/d Disinfection

Eff: # of samples of TP - Effluent Loading: TP - Effluent kg/d

Percent Removal: TP - Influent %

**Ontario Clean Water Agency Agence Ontarienne Des Eaux** 

5985 HORNEPAYNE WASTEWATER TREATMENT FACILITY 110001952

0.288

0.422

0.266

Eff: GMD E. Coli - Effluent cfu/100mL Eff: # of samples of E. Coli - Effluent

Ш	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
<	0.01 <	0.01	0.06	0.03	0.12	0.01	0.03 <	0.01	0.09	0.01	< 0.01	0.04		< 0.04	< 0.12	
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
<	0.005 <	0.005	0.033	0.031	0.140	0.009	0.017 <	0.005	0.043	0.004	< 0.006	0.020		< 0.02	< 0.14	
Ш	44.45	1.41	4.00	27.22	73.48	28.98	80.31	3.46	2.00	1.59	25.00	6.84				200.00
	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	3.00	1.00	3.00	27.00			0.00

0.364

03/07/2025 Page 1 of 1

## pH Monthly Process Data Report

**Customized Monthly Report** From 01/01/2024 to 12/31/2024 Facility Name: HORNEPAYNE WASTEWATER

TREATMENT FACILITY Receiver: Little Jackfish River Facility Org Number: 5985 Facility Owner: Municipality: The Corporation of the Township of Hornepayne

Works: 110001952 Facility Classification: Class 2 Wastewater Treatment Total Design Capacity: 1363 m3/day



															202	24	
Eff	luent	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min
	рн																
	IH Month.Max	7.89	7.64	7.83	7.74	7.86	7.81	7.57	7.28	7.27	7.31	7.11	7.68			7.89	
	IH Month.Mean	7.42	7.20	7.29	7.51	7.64	7.50	7.42	7.10	7.06	6.92	7.01	7.03		7.26		
	IH Month.Min	7.02	6.85	6.93	7.27	7.15	7.29	7.22	6.91	6.82	6.71	6.86	6.89				6.71

Page 1 / 1

## **De-chlorination Monthly Process Data Report**

**Customized Monthly Report** From 01/01/2024 to 12/31/2024 Facility Name: HORNEPAYNE WASTEWATER TREATMENT FACILITY

Receiver: Little Jackfish River

Facility Org Number: 5985 Facility Owner: Municipality: The Corporation of the Township of Hornepayne

Convice Deputation: 10E0

Works: 110001952 Facility Classification: Class 2 Wastewater Treatment Total Design Capacity: 1363 m3/day



														20	24	
Dec	hlorination	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min
	Cl Residual: Total - mg/L															
	IH Month.Max	0.02	0.02	0.02	0.02	0.02	0.07	0.02	0.02	0.02	0.03	0.02			0.07	
	IH Month.Mean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		0.01		
	IH Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00

Extracted: 3/7/2025 1:55:18 PM Page 1 / 1 User: OCWA\\hoffmada, URL: /Customized Reports

## **Biosolids Sludge Quality**



Client: Mark Van Breda Work Order Number: 556100 OCWA - North West Region - Hornepayne PO #: ORG 5985 Company: **WWTP** 37 Honka Drive Address: Regulation: Information not provided Project #: Hornepayne, ON, P0M 1Z0 110001952 DWS #: Phone/Fax: (807) 868-2380 / (807) 868-2410 110001952 Email: mvanbreda@ocwa.com Sampled By: Mark Van Breda Date Order Received: 11/7/2024 Analysis Started: 11/11/2024 11 C Arrival Temperature: Analysis Completed: 11/18/2024

### **WORK ORDER SUMMARY**

Date of Issue: 11/18/2024 11:12

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Туре	Comments	Date Collected	Time Collected
Annual Sludge	2077729	Sludge	None		11/5/2024	5:28 AM

#### METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
Ammonia Water (A42)	Garson	Determination of Ammonia/Ammonium in Water	Modified from EPA 350.1
Anions Water (mg/L by IC) (A5)	Garson	Determination of Anions in Water by Ion Chromatography	Modified from SW846-9056A
ICPMS Tot. Water (A13)	Garson	Determination of Total Metals in Water by ICP/MS with Digestion	Modified from SW846-6020A
TP Water (A23.2)	Garson	Determination of Total Phosphorus in Water.	Modified from EPA 365.3 and ESS 310.2,
TSS (A27)	Garson	Determination of Total Suspended Solids in water by gravimetry	Modified from SM-2540



OCWA - North West Region - Hornepayne WWTP

Fel Halvar

Work Order Number: 556100

This report has been approved by:

Brad Halvorson, B.Sc. Laboratory Director

### **WORK ORDER RESULTS**

Date of Issue: 11/18/2024 11:12

Sample Description	Annual		
Sample Date	11/5/2024		
Lab ID	2077	7729	
Anions	Result	MDL	Units
Nitrate (as N)	<0.15	0.15*	mg/L
Sample Description	Annual		
Sample Date	11/5/2024		
Lab ID	2077		
General Chemistry	Result	MDL	Units
General Chemistry Ammonia (as N)	Result 6.7	MDL 0.1*	Units mg/L
Ammonia (as N) Total Phosphorus (as P)  Sample Description	6.7	0.1* 0.6* Sludge	mg/L
Ammonia (as N) Total Phosphorus (as P) Sample Description Sample Date	6.7 132.0 <b>Annual</b> 11/5/2024	0.1* 0.6* <b>Sludge</b> ‡ 5:28 AM	mg/L
Ammonia (as N) Total Phosphorus (as P)  Sample Description	6.7 132.0 <b>Annual</b>	0.1* 0.6* <b>Sludge</b> ‡ 5:28 AM	mg/L
Ammonia (as N) Total Phosphorus (as P) Sample Description Sample Date	6.7 132.0 <b>Annual</b> 11/5/2024	0.1* 0.6* <b>Sludge</b> ‡ 5:28 AM	mg/L

OCWA - North West Region - Hornepayne WWTP

Work Order Number: 556100

Sample Description	Annual Sludge
Sample Date	11/5/2024 5:28 AM
Lab ID	2077729

Lab ID			
Metals (Total)	Result	MDL	Units
Total Antimony	6.6	0.5	ug/L
Total Arsenic	29	1	ug/L
Total Barium	1880	100*	ug/L
Total Beryllium	<0.5	0.5	ug/L
Total Bismuth	140	10*	ug/L
Total Boron	206	2	ug/L
Total Cadmium	2.91	0.02	ug/L
Total Calcium	224000	5000*	ug/L
Total Cerium	27	1	ug/L
Total Cesium	1	1	ug/L
Total Chromium	90	1	ug/L
Total Cobalt	23.5	0.1	ug/L
Total Copper	12200	1000*	ug/L
Total Europium	1	1	ug/L
Total Gallium	102	1	ug/L
Total Iron	72900	2000*	ug/L
Total Lanthanum	16	1	ug/L
Total Lead	68.4	0.1	ug/L
Total Lithium	16	5	ug/L
Total Magnesium	40700	4	ug/L
Total Manganese	12000	100*	ug/L
Total Mercury	1.5	0.1	ug/L
Total Molybdenum	23	1	ug/L
Total Nickel	81	1	ug/L

Date of Issue: 11/18/2024 11:12

OCWA - North West Region - Hornepayne WWTP

Total Zirconium

Date of Issue: 11/18/2024 11:12

Work Order Number: 556100

Sample Description	Annual		
Sample Date	11/5/2024		
Lab ID	2077	7729	
Metals (Total)	Result	MDL	Units
Total Niobium	<1	1	ug/L
Total Phosphorus	119000	5000*	ug/L
Total Potassium	21600	1000*	ug/L
Total Rhodium	<1	1	ug/L
Total Rubidium	33	1	ug/L
Total Scandium	8	1	ug/L
Total Selenium	26.5	0.2	ug/L
Total Silicon	28000	6000*	ug/L
Total Silver	6.0	0.1	ug/L
Total Sodium	28700	1000*	ug/L
Total Strontium	315	1	ug/L
Total Sulphur	66900	800	ug/L
Total Tellurium	<1	1	ug/L
Total Thallium	0.5	0.1	ug/L
Total Thorium	<1	1	ug/L
Total Tin	4	1	ug/L
Total Titanium	431	10*	ug/L
Total Tungsten	7	1	ug/L
Total Uranium	19	1	ug/L
Total Vanadium	60	1	ug/L
Total Yttrium	8	1	ug/L
Total Zinc	3190	10*	ug/L

26

ug/L



OCWA - North West Region - Hornepayne WWTP

Sample Description	Annual		
Sample Date	11/5/2024		
Lab ID	207		
Solids	Result	MDL	Units
Total Suspended Solids	6200	20	mg/L

### **LEGEND**

Dates: Dates are formatted as mm/dd/year throughout this report.

[rr]: After a parameter name indicates a re-run of that parameter. If multiple re-runs exist they are suffixed by a number. Sample may not have been handled according to the recommended temperature, hold time and head space requirements of the method after the initial analysis.

MDL: Method detection limit or minimum reporting limit.

Date of Issue: 11/18/2024 11:12

Organic Soil Analysis: Data reported for organic analysis in soils samples are corrected for moisture content.

Quality Control: All associated Quality Control data is available on request.

Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.

Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.

Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.

ICPMS Dustfall Insoluble: The ICPMS Dustfall Insoluble Portion method analyzes only the particulate matter from the Dustfall Sampler which is retained on the analysis filter during the Dustfall method.

Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.

\*Dilution: In the MDL column an asterisk (\*) indicates a sample dilution was performed.

Work Order Number: 556100

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DATE	TIME	MATRIX**		E DESCRIPTION Appear On The Report)	NUMBER OF CONTAINERS	Total	TSS	Ь	NH3	N03						FIELD	FIELD	METALS	CONTA	TEMP	Btl. Type	Lab ID
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					+			7		$\dashv$	+	+	+	$\dashv$	1							
**Matrix	: B=Biota	, GW=Grou	nd Water, O=Oil,	P=Paint, S=Soil, SL=Sluc	lge,					D.Re	g. 15	3: (1	2	3 [	] 4 [	]5 [	6 [	7 🗌	8 🗆 9			
SW=Sur	ace Water	r, W=Water	, WW=Wastewate	er, SD=Sediment				ION						Comm						Parkland		Agricultural
□Hi	gh Concent	rations Exped	cted					EGULATION		) P.		Coars			Fine S			Surfac		□Subsu	rface ODWS⊟N	one
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palbert@oc	wa.com; Dh	offman@ocwa.	com; tmcmullen@ocv	drawson@ocwa.com; mvanbreda va.com; jdubois@ocwa.com	woom.	a.con	n;	Rel	inqu	ishe	d to	Testr	nark	By (S	ignat	ure)				Date		Time
Sampled	Ву	Van Ba	77	Date	Tim			Shi	ppe	d By		-	7	V	`∩	2	20	5A	1=	Shippin	g Referen	ce C
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## **Analyzer Verification/Calibration Summary**

## **Calibration Certificate 2967**

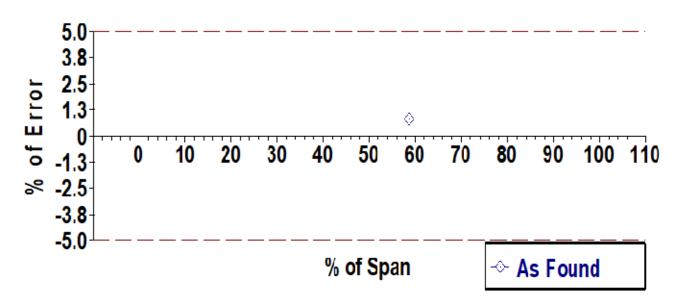
AMS Tag: Hornepayne Final Effluent

Calibrated at: 2024-06-11 7:01:12 PM

Calibration Result: PASSED

Device Identification				
AMS Tag:	Hornepayne Final Effluent			
Device Tag:				
Manufacturer:	Siemens			
Model Name:	Sitrans LUT440			
Device Identifier:	3190364			

	Device Calibration Data					
Date/Time Calibrated:	2024-06-11 7:01:12 PM	Max Error Limit:	5.00 % of Span			
Technician:	DESKTOP-79S6M3S \Lakeside	Notification Limit:	5.00 % of Span			
User:	DESKTOP-79S6M3S \Lakeside	Adjustment Limit:	4.00 % of Span			
Ambient Temperature:	20.00 deg C	Calibration Interval:	12 Months			
Temperature Standard:	ITS-90	Critical Service:	Yes			
Work Order Number:		Input Range:	0.00 - 24.39 cm			
Service Reason:	Not Given	Output Range:	0.00 - 24.39 cm			
Service Notes:						
Relationship: Linear						



## **Calibration Certificate 2967**

AMS Tag: Hornepayne Final Effluent

Test Equipment					
AMS Tag	Manufacturer	Model	Serial Number	Last Calibration	Calibration Interval:
Fluke Distance Meter	Fluke	416D	0682056623		12 Months

Errors (%)					
Error	Limit	Actual: As Found	Actual: As Left		
Maximum	5.0000	0.8200 (Pass)	(N/A)		
Zero	(N/A)	(N/A)	(N/A)		
Span	(N/A)	(N/A)	(N/A)		
Linearity	(N/A)	(N/A)	(N/A)		
Hysteresis	(N/A)	(N/A)	(N/A)		

Calibration Results: As Found					
Test Point	Input	Output	Output Error	Output Error (%)	
1	14.3000	14.5000	0.2000	0.8200	

Calibration Results: As Left						
Test Point	Input	Output	Output Error	Output Error (%)		

	Authorization
Title	Lakeside Process Controls - Asset Republity Services
Signature	Chris Foulds 06/11/2024
Title	
Signature	Date