



April 27, 2021

Reference No. 11135752

Jennifer Carpenter
Assistant Director
Florida Department of Environmental Protection
South District Office
2295 Victoria Avenue #364
Fort Myers, FL 33901

Dear Ms. Carpenter:

**Re: Summary Report
Fecal Indicator Bacteria and Source
Specific Monitoring - April 2021
City of Fort Myers, Florida**

GHD Services Inc. (GHD), on behalf of the City of Fort Myers (City), is submitting this report of results for the April 2021 monitoring event we performed for the above-referenced project.

Purpose

The intent of the April sampling event is to partially satisfy Condition 5(G) of the Consent Order between DEP and the City of Fort Myers (OGC No. 20-0851), effective date February 23, 2021. Per Condition No. 5(G) of the Consent Order, the City is required to "Conduct and submit a minimum of quarterly sampling data for untreated human waste indicators (HF-183 and acetaminophen at a minimum) for at least 4 quarters to the Department for the watersheds referenced in subparagraph 5(F) above (minimum 2 stations per watershed). If untreated human waste indicators persist, quarterly source specific monitoring shall continue until clear for at least two consecutive quarters." Deadline: April 30, 2021; July 31, 2021; October 31, 2021 and continue until no untreated human waste indicators are detected for at least two consecutive quarters. This report summarizes the field and analytical results for samples GHD collected at select locations within the Billy Creek and Manuel Branch watersheds on April 1 and 2, 2021.

Sample Collection

We have expanded our sampling program beyond the minimum identified in 5(G) and our trained sampling personnel collected surface water samples on April 1 and 2, 2021 from twenty-one (21) locations (see attached **Figure 1**). These locations were selected by the City where stormwater discharges occur. Eighteen (18) locations are within the Billy Creek watershed, with sites selected along Billy Creek and the Zapato, Veronica Shoemaker, and Ford Street canals. Three (3) locations are located at stormwater outfalls along Manuel's Branch. Sample locations were selected and confirmed following a reconnaissance of the watersheds and a preliminary Maps on Table meeting. This initial meeting was attended by City staff and GHD on March 26, 2021. Features of interest located during this session included sanitary sewer lines and associated canal crossings, evidence of concentrated wildlife and/or domestic animals, evidence of vagrant activity, and septic tank locations within the watersheds.



There was no obvious evidence of recently dumped human garbage or wastes at any of the sites sampled during the April 2021 event. Photographs documenting conditions at the time of sampling were previously transferred to the City via the Sharepoint file share web page.

The sampling (by GHD) and laboratory analyses (by Benchmark Analytical Laboratories, North Port, Florida; Source Molecular, Miami Lakes, Florida; and, Jupiter environmental Laboratories, Jupiter, Florida) were performed in general conformance with the Florida Department of Environmental Protection field sampling and laboratory analysis quality assurance protocols codified in Chapter 62-160 FAC and Standard Operation Procedures for Field Activities (FDEP SOP-001/01).

Samples were placed in accredited laboratory-provided containers, labeled and iced prior to being transported by GHD the day of collection to the accredited laboratories for analyses under documented legal chain of custody. Samples from each location were analyzed for *Escherichia coli* (E. coli) by SM 9223B). Additionally, samples collected from five (5) select locations, three (3) within the Billy Creek watershed (CFM cemetery, CFM Billy-3, and Veronica Shoemaker-1) and two (2) within the Manuel Branch watershed (CFM Manuel and Manuel-2), were analyzed for the presence of human genetic material (HF183 by quantitative Polymerase Chain Reaction (qPCR)) DNA analytical technology and acetaminophen by EPA 1694 Personal Care Products.

Results and Discussion

Field parameters measured at the time of sample collection included temperature, specific conductance, dissolved oxygen (DO), pH and turbidity. Measuring these parameters and recording them lend to the representativeness and reproducibility of the samples and the conditions under which they are collected. Copies of the field sampling documentation and the laboratory report are attached.

Quantitative Laboratory Analyses

Laboratory analytical reports are attached. All samples were prepared and analyzed within respective method holding times. The method blank results were non-detect. All reported laboratory control sample (LCS) analyses demonstrated acceptable accuracy. Laboratory duplicate analyses were performed for some analytes. The matrix spike (MS) results were evaluated per the laboratory limits. The MS analyses performed were acceptable, demonstrating good analytical accuracy and are, therefore, deemed valid.

Table 1 summarizes April 2021 individual laboratory results for all locations sampled.

- **Escherichia coli (E. coli)** – E. coli is a type of fecal coliform bacteria that is commonly found in the intestinal tracts of warm-blooded animals. E. coli detected in surface waters suggests the presence of untreated human or animal waste. E. Coli data was also compared to Course of Action Triggers, as identified in the Florida Department of Environmental Protection's August 2018 *Restoring Bacteria-Impaired Waters, A Toolkit to Help Local Stakeholders Identify and Eliminate Potential Pathogen Problems (Toolkit)*, Version 3.0. According to the Toolkit, Course of Action Triggers and responses are as follows:
 - **Possible emergency:** Either E. coli counts greater than 100,000 colony forming units (cfu)/100mL. Any stormwater or ambient water samples in this range, barring any inflation at the time of sampling (e.g., biofilm disturbance), should be considered worthy of an immediate revisit. This is the first indication of a hot spot, a potential sanitary sewer overflow (SSO), illegal dumping, an



illicit connection, or a failing Onsite Sewage Treatment and Disposal Systems (OSTDS). Return to the site as soon as possible and investigate the contributing area for signs of the source.

Resample the original site and take samples throughout the contributing area to narrow down the locational origin and add acetaminophen and HF183.

- Very concerning level: Either E. coli counts greater than or equal to 10,000 cfu/100mL but less than 100,000 cfu/100mL. If the actual count is what is reported (after reviewing laboratory QA/QC and sample dilution information), and, barring any inflation at the time of sampling (biofilm disturbance), a result in the tens of thousands indicates a hot spot.
- Difficult to discern: Either E. coli counts greater than or equal to 800 cfu/100mL but less than 10,000 cfu/100mL. FIB results in the high hundreds and low thousands don't warrant immediate action, but plan to address them when higher priority areas are remediated. Sample for source-specific indicators when trying to identify sources and their origins in waters where FIB results are common in this range.
- Low-level exceedances: Either E. coli counts in the mid-hundreds of cfu/100mL. FIB results in the mid-hundreds are not usually associated with persistent contributions of untreated human waste and don't warrant immediate action, but plan to address them when higher priority areas are remediated. Sample for source-specific indicators when trying to identify sources and their origins in waters where FIB results are common in this range.

Concentrations of E. coli in the April 2021 samples ranged from not detected with an MDL of 10 cfu/100 mL at Veronica Shoemaker-1 to 4,106 cfu/100mL at Manuel-2. Individual concentrations of E. coli in samples collected during the April 2021 event at the Ford Street-3, CFM_Marsh, CFM_Manuel, and Manuel-2 were within the "Difficult to Discern Course" category, and the remaining concentrations could be categorized as "Low-level exceedances".

- **HF183** – The HF183 DNA fragment from the 16S rRNA gene of Bacteroides is primarily associated with human fecal material and is used to identify human fecal bacteria in ambient water. Established guidelines for interpreting HF183 results do not exist. However according to a 2016 FDEP presentation entitled *Microbial source tracking: interpretation of qPCR results*, GEU/100 mL detection in the millions can be considered a "high" signal, above ten thousand GEU/100 mL as a "moderate" signal, and less than ten thousand GEU/100 mL can be interpreted as a "low" signal. HF183 markers were analyzed for CFM_Manuel and Manuel-2, with reported values of 77.6 GEU per 100mL and 11,200 GEU per 100mL. HF 183 was not detected in the samples collected from CFM_Cemetery, Veronica Shoemaker-1, and CFM Billy-3.
- **Acetaminophen** –The pharmaceutical acetaminophen is a chemical marker that is used as a human waste indicator in microbial source tracing. Concentrations of acetaminophen were below the laboratory method detection limit of limit of 2.00 micrograms per liter (µg/L) at each of the sample locations.



Conclusions

Based on the laboratory analytical results of the sampling event, the presence of E. Coli in the "Difficult to Discern" Action Trigger category, coupled with a "moderate" signal detection of HF183 at the Manuel-2 location suggest the possibility of new or ongoing point sources of contaminants. Continued monitoring to confirm or deny the results of the April 2021 sampling event, and additional monitoring to determine the location of the potential source, will be conducted in May 2021. Further, additional continued E. coli samples monitoring will be collected at each of the remaining twenty (20) locations at that time.

Based on a review of sanitary sewer infrastructure locations, a sanitary sewer line trends parallel to the north bank of Manuel Branch between the Manuel-2 and Manuel-3 sample locations. The results of the sampling event suggest the sanitary sewer line is a possible source of contaminants. As a part of the City Master Plan, we understand the portion of the sewer line situated alongside the north bank of Manuel Branch, between Evans and Central is slated for improvements. The City will expedite construction of this project to resolve the potential problems associated with the bacteria. All utility improvements on the south side of the canal have been completed.

With the exception of the sample collected at the Ford Street-3 and CFM_Marsh locations, samples collected from the Billy Creek watershed were either in the "Low-level exceedances" or "Meets criteria" Action Trigger category. Samples for E. coli analysis will be collected from each of the sample locations during the May sampling event. At the Ford Street-3 and CFM_Marsh locations, E. Coli was present at levels falling within the "Difficult to discern" Action Trigger category. Samples collected from these locations during the May sampling event will be used to confirm or deny the continued E. coli concentrations reported in April. If the concentrations remain within the difficult to discern Action Trigger category, subsequent sampling and analysis for HF183 and acetaminophen may be warranted.

If you require additional information or clarification, please feel free to contact Lori Coolidge at (813) 476-9940 or David Hempleman at (239) 215-3909.

Sincerely,

A blue ink signature of Lori Coolidge, featuring a stylized, cursive 'L' and 'C' followed by a horizontal line.

Lori Coolidge, P.G.

A blue ink signature of David G. Hempleman, featuring a stylized 'D' and 'H' followed by a horizontal line.

David G. Hempleman, P.E.

Encl.

cc: Richard Thompson, City of Fort Myers
file

Table

City of Fort Myers SW Sampling
FIB Sample Results

Sample Location	Sample Date	E. coli cfu/100mL	HF 183 GEU/100mL	Acetaminophen ug/L
1ST STREET	4/1/2021	132	NS	NS
SEABOARD	4/1/2021	118	NS	NS
KING STREET	4/1/2021	187	NS	NS
SHOEMAKER BRIDGE	4/1/2021	327	NS	NS
MARSH	4/1/2021	1145	NS	NS
CFM-BCP4-10	4/1/2021	20	NS	NS
CFM-BCP1-10	4/1/2021	20	NS	NS
CFM_BILLY-3	4/1/2021	279	ND	ND
ZAPATO-2	4/2/2021	63	NS	NS
ZAPATO-3	4/2/2021	52	NS	NS
VERONICA SHOEMAKER-1	4/1/2021	10	ND	ND
VERONICA SHOEMAKER-2	4/2/2021	350	NS	NS
VERONICA SHOEMAKER-3	4/2/2021	52	NS	NS
VERONICA SHOEMAKER-4	4/2/2021	20	NS	NS
CFM_FSP	4/1/2021	135	NS	NS
CFM_CEMETERY	4/1/2021	697	ND	ND
FORD STREET-2	4/2/2021	733	NS	NS
FORD STREET-3	4/2/2021	932	NS	NS
CFM_MANUEL	4/1/2021	1989	77.6	ND
MANUEL-2	4/1/2021	4106	11,200	ND
MANUEL-3	4/2/2021	285	NS	NS

NS = Not sampled

ND = Samples, not detected above the laboratory detection limit

Data Table Footnotes with Course of Action Triggers (per *Restoring Bacteria-Impaired Waters, A Toolkit to Help Local Stakeholders Identify and Eliminate Potential Pathogen Problems developed by the Water Quality Restoration Program Division of Environmental Assessment and Restoration Florida Department of Environmental Protection Version 3.0,*

Possible emergency: Either E. coli counts greater than 100,000 cfu/100mL

Any stormwater or ambient water samples in this range, barring any inflation at the time of sampling (biofilm disturbance), should be considered worthy of an immediate revisit. This is the first indication of a hot spot, a potential sanitary sewer overflow (SSO), illegal dumping, an illicit connection, or a failing Onsite Sewage Treatment and Disposal Systems (OSTDS).

Return to the site as soon as possible and investigate the contributing area for signs of the source. Resample the original site and take samples throughout the contributing area to narrow down the locational origin. Add acetaminophen and HF183.

Very concerning level: Either E. coli counts greater than or equal to 10,000 cfu/100mL but less than 100,000 cfu/100mL

If the actual count is what is reported (after reviewing laboratory QA/QC and sample dilution information), and, barring any inflation at the time of sampling (biofilm disturbance), a result in the tens of thousands indicates a hot spot.

Difficult to discern: Either E. coli counts greater than or equal to 800 cfu/100mL but less than 10,000 cfu/100mL

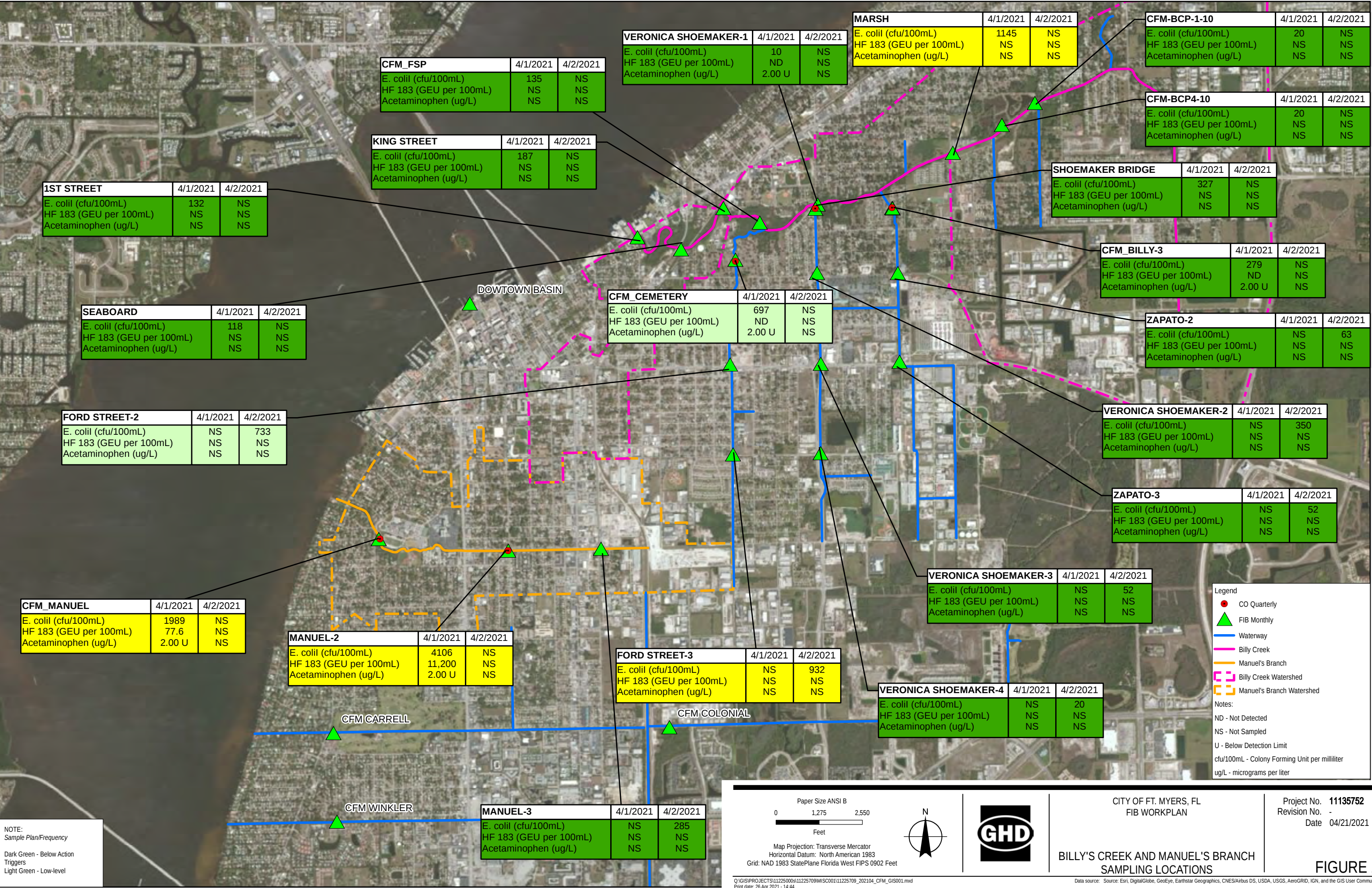
FIB results in the high hundreds and low thousands don't warrant immediate action, but plan to address them when higher priority areas are remediated. Sample for source-specific indicators when trying to identify sources and their origins in waters where FIB results are common in this range.

Low-level exceedances: Either E. coli counts in the mid-hundreds of cfu/100mL

FIB results in the mid-hundreds are not usually associated with persistent contributions of untreated human waste and don't warrant immediate action, but plan to address them when higher priority areas are remediated. Sample for source-specific indicators when trying to identify sources and their origins in waters where FIB results are common in this range.

Below Action Triggers

Figure



Appendix A

Laboratory Reports

SAMPLE RECEIPT CONFIRMATION SHEET

Client Information

SDG:	2173176	Profile:	3250
Client:	GHD Tampa	Project:	Coolidge
Level:	1	Date Rec'd:	4/2/2021 9:00:00 AM
Rec'd via:	courier		

Cooler Check

Security Tape

ID	Temp	# of samples	Present	Intact	Method of Receipt	Comments
	3.1	5	☐	☐		

Checked By: SPC

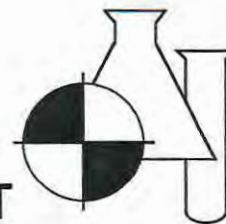
Sample Verification

Loose Caps?	No	All Samples on COC accounted For?	Yes
Broken Containers?	No	All Samples on COC?	Yes
pH Verified?	No	Written on Internal COC?	No
pH Strip Lot #		Sample Vol. Suff. For Analysis?	Yes
Acid Preserved Samples Lot #		Samples Rec'd W/I Hold Time?	Yes
Base Preserved Samples Lot #		Are All Samples to be Analyzed?	Yes
Samples Received From	courier	Correct Sample Containers?	Yes
Soil Origin (Domestic/Foreign)		COC Comments written on COC?	Yes
Site Location/Project on COC?	Yes	Samplers Initials on COC?	Yes
Client Project # on COC?	Yes	Sample Date/Time Indicated?	Yes
Project Mgr. Indicated on COC	Yes	TAT Requested:	RUSH
COC relinquished/Dated by Client?	Yes	Client Requests Verbal Results?	Yes
COC Received/Dated by JEL	Yes	Client Notified of discrepancies?	No
JEL to Conduct ALL Analyses?	Yes	Do VOC vials have headspace or a bubble <6mm (1/4")?	No
Number of Encores	0	Number of Lab Filtered Metals	0

Subcontract Analysis

Parameter	Via	Lab Name	Comments
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BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission Number : S 21040035

G H D Services, Inc
2675 Winkler Ave. Suite 180
Fort Myers, FL 33901

Project Name : MONTHLY NPDES CITY OF FT MYERS
Date Received : 04/01/2021
Time Received : 1521

Submission: S 21040035

Sample Number: 001 **Sample Description:** CFMCOLONIAL
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 0855

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	41	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 002 **Sample Description:** CFMWINKLER
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 0920

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	98	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

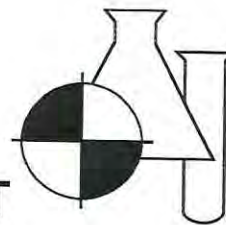
Submission: S 21040035

Sample Number: 003 **Sample Description:** CFMCARRELL
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 0940

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	41	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040035

Sample Number: 004

Sample Date: 04/01/2021

Sample Time: 1000

Sample Description: CFMMANUEL

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	1989	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 005

Sample Date: 04/01/2021

Sample Time: 1335

Sample Description: BCP4-10

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	20	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 006

Sample Date: 04/01/2021

Sample Time: 1345

Sample Description: BCP1-10

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	20	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 007

Sample Date: 04/01/2021

Sample Time: 1305

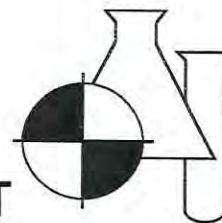
Sample Description: CFMBILLY3

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	279	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040035

Sample Number: 008

Sample Date: 04/01/2021

Sample Time: 1155

Sample Description: CFMFSP

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	135	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 009

Sample Date: 04/01/2021

Sample Time: 1220

Sample Description: CFMCEMETERY

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	697	#/100ML	10	10	SM9223B	04/01/2021	15:41	KH

Submission: S 21040035

Sample Number: 010

Sample Date: 04/01/2021

Sample Time: 1245

Sample Description: Veronica Shoemaker - 1

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	10	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

Submission: S 21040035

Sample Number: 011

Sample Date: 04/01/2021

Sample Time: 1030

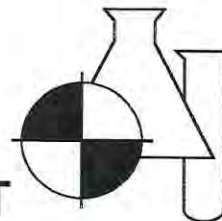
Sample Description: Manuel-2

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	4106	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040035

Sample Number: 012

Sample Description: Dup 1

Sample Date: 04/01/2021

Sample Method: Grab

Sample Time:

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	10	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

Melinda Merchant

04/20/2021

Dale D. Dixon / Laboratory Director

Date

Melinda Merchant/ Laboratory Manager

DATA QUALIFIERS THAT MAY APPLY:

A = Value reported is an average of two or more determinations.

B = Results based upon colony counts outside the ideal range.

H = Value based on field kit determination. Results may not be accurate.

I = Reported value is between the laboratory MDL and the PQL.

J1 = Est. value surrogate recovery limits exceeded.

J2 = Est. value. No quality control criteria exists for component.

J3 = Est. value quality control criteria for precision or accuracy not met.

J4 = Est. value. Sample matrix interference suspected.

J5 = Est. value. Data questionable due to improper lab or field protocols

K = Off-scale low. Value is known to be < the value reported.

L = Off-scale high. Value is known to be > the value reported

N = Presumptive evidence of presence of material.

Q = Sample held beyond accepted hold time (15 minutes for pH).

T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.

U = Analyte analyzed but not detected at the value indicated.

V = Analyte detected in sample and method blank.

Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.

Z = Too many colonies were present (TNTC); the numeric value represents the filtration volume.

? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the Presence or absence of the analyte cannot be determined from the data.

! = Data deviate from historically established concentration ranges.

* = Not reported due to interference.

NOTES:

PQL = 4xMDL. Except for Micro PQL=MDL

X = Value exceed MCL.

For questions and comments regarding these results, please contact Melinda Merchant at (941) 625-3137

These results relate only to the samples included in this report.

Benchmark EnviroAnalytical, Inc.

1711 Twelfth Street East
Palmetto, FL 34221

(941) 723-9986
(941) 723-6061 fax

www.benchmarkea.com

7 Day TAT

Sample Temperature checked upon receipt with Temperature Gun ID #RAYL000570277

FDEP WIN

Client:

GHD Services, Inc. (GSA ENG)

2675 Winkler Ave. Suite 180
Ft. Myers, FL 33901

Andrew Wyatt

Fax: 239-936-0819

Reports: Christina Bergthold (Christina.Bergthold@ghd.com)

Andrew Wyatt (Andrew.Wyatt@ghd.com)

Kit Shipped to client via UPS Standard in 2 large coolers

Chain of Custody Form: Monthly NPDES City of Ft. Myers Analysis
Project Number: 11135752/03/****

Profile 452

Laboratory Submission #:

Station ID	Sample Type ¹	Sample Matrix ²	Laboratory Submission #						
			NH ₃ (350.1) NO ₃ -NO ₂ (353.2) TKN (351.2) T-P (365.3) T-N	BOD ₅ (SM210B) Cl (300.0) TDS (SM2540C)	TSS (SM2540B) Ortho - Phos (Lab Filtered) (365.3)	Enterococci E. coli	Corrected Chlorophyll a (445.0) Filtered @ Beas 4/21/21 0850		
CFMCOLONIAL	Grab	SW	1:4 H ₂ SO ₄ pH<2 □	Plain	Plain	NaFluo	Plain		
			1 x 1/2 Pint Plastic	1 x 1 Quart Plastic	1 x 1 Quart Plastic	1 x 100mL Sterile Plastic	1 x 500mL Opaque Plastic		
			Date/Time: 04.01.21 / 0855						
CFMWINKLER	Grab	SW	Date/Time: 04.01.21 / 0926						1
CFMCARRELL	Grab	SW	Date/Time: 04.01.21 / 0940						2
CFMMANUEL	Grab	SW	Date/Time: 04.01.21 / 1000						3
BCP4-10	Grab	SW	Date/Time: 04.01.21 / 1035						4
BCP1-10	Grab	SW	Date/Time: 04.01.21 / 1345						5
CFMBILLY3	Grab	SW	Date/Time: 04.01.21 / 1305						6
CFMFSP	Grab	SW	Date/Time: 04.01.21 / 1220						7
CFMCEMETERY	Grab	SW	Date/Time: 04.01.21 / 1220						8
CFMBASIN	Grab	SW	Date/Time: 04.01.21 / 1245						9
CFMBASIN	Grab	SW	Date/Time: 04.01.21 / 1245						10

Notes:
Each bottle has a label identifying sample ID, preservative contained in the bottle, sample type, client ID, and parameters for analysis.
The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.
The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

Collector: L. Haverlin / J. W. Galt
Relinquished By: _____
Date & Time: 04.01.21 / 1521

Received By:	Received By:	Received By:	Received By:
4	6	4	6
Date & Time:	Date & Time:	Date & Time:	Date & Time:
04.01.21 / 1521	04.01.21 / 1521	04.01.21 / 1521	04.01.21 / 1521

Manuel-2

Grab SW

04.01.21 / 1036

0091

Grab SW

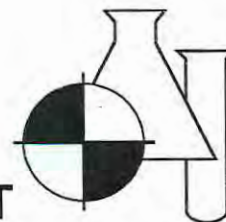
04.01.21

BEAS Sample Receipt Temp. 4.0 °C

Checked at Benchmark EA South E85086
With Temperature Gun ID #7

Page 5 of 5

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission Number : S 21040036

G H D Services, Inc
2675 Winkler Ave. Suite 180
Fort Myers, FL 33901

Project Name : CITY OF FORT MYERS FIB
Date Received : 04/01/2021
Time Received : 1521

Submission: S 21040036

Sample Number: 001 **Sample Description:** Marsh
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 1320

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	1145	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

Submission: S 21040036

Sample Number: 002 **Sample Description:** Shoemaker Bridge
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 1210

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	327	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

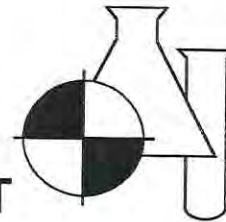
Submission: S 21040036

Sample Number: 003 **Sample Description:** King Street
Sample Date: 04/01/2021 **Sample Method:** Grab
Sample Time: 1135

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	187	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040036

Sample Number: 004

Sample Description: Seaboard

Sample Date: 04/01/2021

Sample Method: Grab

Sample Time: 1120

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	118	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

Submission: S 21040036

Sample Number: 005

Sample Description: 1st Street

Sample Date: 04/01/2021

Sample Method: Grab

Sample Time: 1105

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	132	#/100ML	10	10	SM9223B	04/01/2021	16:00	KH

Melinda Merchant

04/20/2021

Dale D. Dixon / Laboratory Director

Date

Melinda Merchant/ Laboratory Manager

DATA QUALIFIERS THAT MAY APPLY:

A = Value reported is an average of two or more determinations.

B = Results based upon colony counts outside the ideal range.

H = Value based on field kit determination. Results may not be accurate.

I = Reported value is between the laboratory MDL and the PQL.

J1 = Est. value surrogate recovery limits exceeded.

J2 = Est. value. No quality control criteria exists for component.

J3 = Est. value quality control criteria for precision or accuracy not met.

J4 = Est. value. Sample matrix interference suspected.

J5 = Est. value. Data questionable due to improper lab or field protocols

K = Off-scale low. Value is known to be < the value reported.

L = Off-scale high. Value is known to be > the value reported

N = Presumptive evidence of presence of material.

Q = Sample held beyond accepted hold time (15 minutes for pH).

T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.

U = Analyte analyzed but not detected at the value indicated.

V = Analyte detected in sample and method blank.

Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.

Z = Too many colonies were present (TNTC); the numeric value represents the filtration volume.

? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the Presence or absence of the analyte cannot be determined from the data.

! = Data deviate from historically established concentration ranges.

* = Not reported due to interference.

NOTES:

PQL = 4xMDL. Except for Micro PQL=MDL

X = Value exceed MCL.

For questions and comments regarding these results, please contact Melinda Merchant at (941) 625-3137

These results relate only to the samples included in this report.

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

standard report

21040036

PAGE 2 OF 3

Benchmark EnviroAnalytical, Inc.
1711 Twelfth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
www.benchmarkea.com

Sample Temperature checked upon receipt with Temperature Gun ID #RAYL000570277

Client: **GHD Services, Inc. (HSA ENG)**
2675 Winkler Ave. Suite 180
Ft. Myers, FL 33901
Andrew Wyatt
Fax: 239-936-0819

Kit Shipped to client via UPS Standard in cooler

Reports: Christina Bergthold (Christina.Bergthold@ghd.com)
Andrew Wyatt (Andrew.Wyatt@ghd.com)

3 of 3
Page 4 of 4

Chain of Custody Form:

Project Number: City of Fort Myers FIB 11135752

Laboratory Submission #:

521040036

Station
ID

Sample
Type¹

Sample
Matrix²

E. coli (SM9223B-QT) / Enterococci

NaThio³

1 x 100mL Sterile Plastic

Laboratory
Submission
#

Marsh

Grab

SW

Date/Time: 04-01-21 / 1320

Verbal

Shoemaker Bridge

Grab

SW

Date/Time: 04-01-21 / 1210

Results

King Street

Grab

SW

Date/Time: 04-01-21 / 1135

ASAP

Seaboard

Grab

SW

Date/Time: 04-01-21 / 1120

813-313-9237

1st Street

Grab

SW

Date/Time: 04-01-21 / 1105

Grab

SW

Date/Time:

Grab

SW

Date/Time:

Grab

SW

Date/Time:

¹ "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).

² "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), soil, sediment (SDMNT), or sludge (SLDG).

³ "Container Type" is used to indicate whether the container is plastic (P) or glass (G).

⁴ Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 6°C (42.8°F).

Under "Preservative," list any preservatives that were added to the sample container.

Laboratory Sample Acceptability: pH < 2 : 0

BEAS Temperature: 4.0°C

BEA Temperature:

Instructions:

1. Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis.

2. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.

3. All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

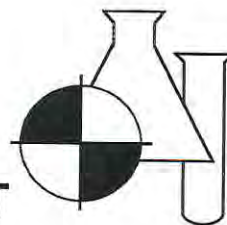
4. The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

1	Collector: <u>L. Haverlin / A. Wyatt</u>	Date & Time: <u>04-01-21 1521</u>	2	Received By: <u>[Signature]</u>	Date & Time: <u>4/1/21 1521</u>
3	Relinquished By:	Date & Time:	4	Received By:	Date & Time:
5	Relinquished By:	Date & Time:	6	Received By:	Date & Time:
7	Relinquished By:	Date & Time:	8	Received By:	Date & Time:

BEAS Sample Receipt Temp. 4.0 °C

Checked at Benchmark EA South E85086
With Temperature Gun ID #7

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission Number : S 21040072

G H D Services, Inc
2675 Winkler Ave. Suite 180
Fort Myers, FL 33901

Project Name : CITY OF FORT MYERS FIB
Date Received : 04/02/2021
Time Received : 1340

Submission: S 21040072

Sample Number: 001

Sample Date: 04/02/2021

Sample Time: 1130

Sample Description: Ford Street -2

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	733	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Submission: S 21040072

Sample Number: 002

Sample Date: 04/02/2021

Sample Time: 1115

Sample Description: Ford Street -3

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	932	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Submission: S 21040072

Sample Number: 003

Sample Date: 04/02/2021

Sample Time: 1145

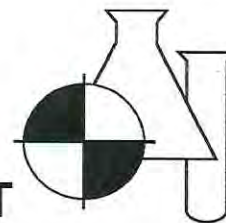
Sample Description: Manuel -3

Sample Method: Grab

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	285	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT

THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040072

Sample Number: 004

Sample Description: Veronica Shoemaker -2

Sample Date: 04/02/2021

Sample Method: Grab

Sample Time: 1030

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	350	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Submission: S 21040072

Sample Number: 005

Sample Description: Veronica Shoemaker -3

Sample Date: 04/02/2021

Sample Method: Grab

Sample Time: 1045

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	52	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Submission: S 21040072

Sample Number: 006

Sample Description: Veronica Shoemaker -4

Sample Date: 04/02/2021

Sample Method: Grab

Sample Time: 1100

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	20	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Submission: S 21040072

Sample Number: 007

Sample Description: Zapato -2

Sample Date: 04/02/2021

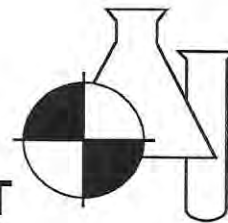
Sample Method: Grab

Sample Time: 1015

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	63	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

1001 Corporate Ave, Suite 102 North Port, FL 34289 Phone: (941) 625-3137 Fax: (941) 240-3071

BENCHMARK EA SOUTH



ANALYTICAL TEST REPORT THESE RESULTS MEET NELAC STANDARDS

NELAC Certification # E85086

Submission: S 21040072

Sample Number: 008

Sample Description: Zapato -3

Sample Date: 04/02/2021

Sample Method: Grab

Sample Time: 1000

Parameter	Result	Units	MDL	PQL	Procedure	Analysis		Analyst
						Date	Time	
E- COLI BY IDEXX QUANTITRAY	52	#/100ML	10	10	SM9223B	04/02/2021	13:55	LG

Melinda Merchant

04/06/2021

Dale D. Dixon / Laboratory Director

Date

Melinda Merchant/ Laboratory Manager

DATA QUALIFIERS THAT MAY APPLY:

A = Value reported is an average of two or more determinations.

B = Results based upon colony counts outside the ideal range.

H = Value based on field kit determination. Results may not be accurate.

I = Reported value is between the laboratory MDL and the PQL.

J1 = Est. value surrogate recovery limits exceeded.

J2 = Est. value. No quality control criteria exists for component.

J3 = Est. value quality control criteria for precision or accuracy not met.

J4 = Est. value. Sample matrix interference suspected.

J5 = Est. value. Data questionable due to improper lab or field protocols

K = Off-scale low. Value is known to be < the value reported.

L = Off-scale high. Value is known to be > the value reported

N = Presumptive evidence of presence of material.

Q = Sample held beyond accepted hold time (15 minutes for pH).

T = Value reported is < MDL. Reported for informational purposes only and shall not be used in statistical analysis.

U = Analyte analyzed but not detected at the value indicated.

V = Analyte detected in sample and method blank.

Y = Analysis performed on an improperly preserved sample. Data may be inaccurate.

Z = Too many colonies were present (TNTC); the numeric value represents the filtration volume.

? = Data rejected and should not be used. Some or all of QC data were outside criteria, and the Presence or absence of the analyte cannot be determined from the data.

! = Data deviate from historically established concentration ranges.

* = Not reported due to interference.

NOTES:

PQL = 4xMDL. Except for Micro PQL=MDL

X = Value exceed MCL.

For questions and comments regarding these results, please contact Melinda Merchant at (941) 625-3137

These results relate only to the samples included in this report.

Benchmark EnviroAnalytical, Inc.

1711 Twelfth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
www.benchmarkea.com

Client:

GHD Services, Inc. (GSA ENG)
2675 Winkler Ave. Suite 180
Ft. Myers, FL 33901
Andrew Wyatt
Fax: 239-936-0819
Reports: Christina.Bergthold@ghd.com
Andrew Wyatt (Andrew.Wyatt@ghd.com)

KIT Shipped to client via UPS Standard in cooler

★ Verbal Report ASAP 813-373-7237
Andrew Wyatt

Sample Temperature checked upon receipt with Temperature Gun ID #RAYL000570277

Chain of Custody Form: City of Fort Myers FIB 45 per Adv. 9/21/11 mm
Project Number: 11185752

Laboratory Submission #:

SZ1040072

Station ID	Sample Type ¹	Sample Matrix ²	Date/Time:	Time	Received By:	Date & Time:	Laboratory Submission #	Laboratory Submission #
Ford Street -2	Grab	SW	4-2-21	1130	Andrew Wyatt	4/2/21 1340	SZ1040072	1
Ford Street -3	Grab	SW		1115	Andrew Wyatt			2
Manuel -3	Grab	SW		1145	Andrew Wyatt			3
Veronica Shoemaker -2	Grab	SW		1030	Andrew Wyatt			4
Veronica Shoemaker -3	Grab	SW		1045	Andrew Wyatt			5
Veronica Shoemaker -4	Grab	SW		1100	Andrew Wyatt			6
Zapata -2	Grab	SW		1015	Andrew Wyatt			7
Zapata -3	Grab	SW		1000	Andrew Wyatt			8

1. Each bottle has a label identifying sample ID, preservation preservative contained in the bottle, sample type, client ID, and parameters for analysis.

2. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sample's name or initials, and any field number or ID.

3. All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

4. The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

5. Under "Preservative," list any preservatives that were added to the sample container.

6. "Sample Matrix" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).

7. "Sample Matrix" is used to indicate whether the sample is based on grab (G), groundwater (GW), surface water (SW), soil, sediment (SD), or sludge (SLD).

8. "Container Type" is used to indicate whether the container is plastic (P) or glass (G).

9. Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 6°C (42.8°F).

10. Under "Preservative," list any preservatives that were added to the sample container.

Laboratory Sample Acceptability: pH < 2 : 0

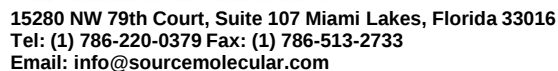
BEAS Temperature: 5.8 °C

BEA Temperature:

Page 5 of 5

BEAS Sample Receipt Temp. 5.8 °C

Checked at Benchmark EA South E85086
With Temperature Gun ID #7



Submitter: GHD Services, Inc

Date Received/Processed: April 2, 2021

Report Generated: April 6, 2021

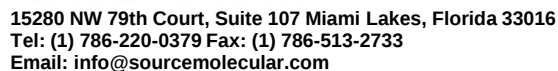
ND: Not Detected

Reported Results Authorized By: Anda Quintero, Quality Manager

Results reported herein apply only to the sample matrices as received.

Results reported herein relate to the genetic material extracted from the sample matrix processed and included in the analysis.

Revision 1.4
Effective Date 12/12/19



Submitter: GHD Services, Inc

Date Received/Processed: April 2, 2021

Report Generated: April 6, 2021

ND: Not Detected

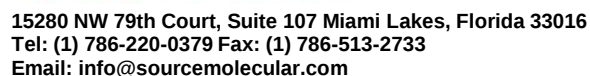
Reported Results Authorized By: Anda Quintero, Quality Manager

Results reported herein apply only to the sample matrices as received.

Results reported herein relate to the genetic material extracted from the sample matrix processed and included in the analysis.

*Results reported with units of genomic equivalent units (GEU) per 100 ml. The concentration was calculated by dividing the measured copies per 100ml by 7 copies per genome. The targeted sequence has 7 matches in the complete genome of the target bacterium.

Revision 1.4
Effective Date 12/12/19



Laboratory Comments

Submitter: GHD Services, Inc

Report Generated: April 6, 2021

Non-Detect Results

In sample(s) classified as non-detect, the host-associated fecal gene biomarker(s) was either not detected in test replicates, one replicate was detected at a cycle threshold greater than 35 and the other was not, or one replicate was detected at a cycle threshold less than 35 and the other was not after repeated analysis.

Detected Results

In sample(s) classified as detected, the host-associated fecal gene biomarker(s) was detected in both test replicates suggesting that the host's fecal contamination is present in the sample(s). Copy number measurements reported are relative, not absolute, quantification.

Detected Not Quantified (DNQ) Results

In sample(s) classified as Detected Not Quantified (DNQ), the host-associated fecal biomarker was detected in both test replicates but in quantities below the limit of quantification. This result indicates that fecal indicators associated with the respective host was present in the sample(s) but in low concentrations.

Fecal Reference Samples

The client is encouraged to submit fecal samples from suspected sources in the surrounding area in order to gain a better understanding of the concentration of the host-associated biomarker with the regional population. A more precise interpretation would be available to the client with the submittal of such baseline samples.

Result Interpretations

The presence of the biomarker does not signify the presence or absence of that form of fecal pollution conclusively. The most reliable way to accurately test for contamination is to combine genetic testing with scientifically sound and adequate study design appropriate for the water quality questions to be answered or issues to be resolved.

Additional Testing

A portion of all samples has been frozen and will be archived for 3 months. The client is encouraged to perform additional tests on the sample(s) for other hosts suspected of contributing to the fecal contamination.

Limitation of Damages – Repayment of Service Price

It is agreed that in the event of breach of any warranty or breach of contract, or negligence of Source Molecular Corporation, as well as its agents or representatives, the liability of the company shall be limited to the repayment, to the purchaser (submitter), of the individual analysis price paid by him/her to Source Molecular Corp. The company shall not be liable for any damages, either direct or consequential. Source Molecular Corp. provides analytical services on a PRIME CONTRACT BASIS ONLY. Terms are available upon request. The sample(s) cited in this report may be used for research purposes after an archiving period of 3 months from the date of this report. Research includes, but is not limited to internal validation studies and peer-reviewed research publications. Anonymity of the sample(s), including the exact geographic location will be maintained by assigning an arbitrary internal reference. These anonymous samples will only be grouped by state / province of origin for research purposes. The client must contact Source Molecular in writing within 10 days from the date of this report if he/she does not wish for their submitted sample(s) to be used for any type of future research.

DNA Analytical Method Explanation

Water Samples: Each submitted water sample is filtered through 0.45 micron membrane filter(s). Each filter is placed in a separate, sterile 2ml disposable tube containing a unique mix of beads and lysis buffer. The sample is homogenized for 1min and the DNA extracted using the Generite DNA-EZ ST1 extraction kit (GeneRite, NJ), as per manufacturer's protocol. Deviations to these procedures may occur at the client's request.

Non-Water Samples: Each non-water sample submitted by the client is processed as per internal laboratory extraction procedures. An extracted DNA sample is proceed directly to PCR analysis. Details available upon request.

Amplifications to detect the target gene biomarker were run on an Applied Biosystems StepOnePlus real-time thermal cycler (Applied Biosystems, Foster City, CA) in a final reaction volume of 20ul sample extract, forward primer, reverse primer, probe and an optimized buffer. All assays are run in duplicate. Quantification is achieved by extrapolating target gene copy numbers from a standard curve generated from serial dilutions of known gene copy numbers.

For quality control purposes, a positive control and a negative control, were run alongside the sample(s) to ensure a properly functioning reaction and reveal any false negatives or false positives.

April 15, 2021

Lori Coolidge
5907 Hampton Oaks Parkway
Tampa, FL 33603

RE: LOG# 2173176
Project ID: City of Ft Myers FIB
COC# 2173176

Dear Lori Coolidge:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, April 02, 2021. Results reported herein conform to the most current NELAC standards, where applicable, unless indicated by * in the body of the report. The enclosed Chain of Custody is a component of this package and should be retained with the package and incorporated therein.

Results for all solid matrices are reported in dry weight unless otherwise noted. Results for all liquid matrices are reported as received in the laboratory unless otherwise noted. Results relate only to the samples received. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

Samples are disposed of after 30 days of their receipt by the laboratory unless extended storage is requested in writing. The laboratory maintains the right to charge storage fees for archived samples. This report will be archived for 5 years after which time it will be destroyed without further notice, unless prior arrangements have been made.

Certain analyses are subcontracted to outside NELAC certified laboratories, please see the Project Summary section of this report for NELAC certification numbers of laboratories used. A Statement of Qualifiers is available upon request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



John Heyman for
Kacia Baldwin
kaciab@jupiterlabs.com

Report ID: 2173176
4/15/2021

Page 1 of 11

NELAP Accredited

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..



CASE NARRATIVE

Jupiter Environmental Laboratories Inc. Lab Reference No./SDG: 2173176

Client: GHD Tampa

I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

II. METHODS

Samples were analyzed according to JEL's Standard Operating Procedures for following Method(s):
EPA1694 Personal Care Products

III. Analysis

Sample analysis proceeded normally.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Jupiter Environmental Laboratories, Inc., both technically and for completeness, for other than the conditions detailed in the SDG Narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

SIGNED: DATE: 4/15/21



John Heyman for
Kacia Baldwin
V.P. of Operations

SAMPLE ANALYTE COUNT

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID	Sample ID	Method	Analytes Reported
2173176001	CFM Cemetary	EPA1694 Personal Care Products	2
2173176002	CFM Billy - 3	EPA1694 Personal Care Products	2
2173176003	Veronica Shoemaker - 1	EPA1694 Personal Care Products	2
2173176004	Manuel - 2	EPA1694 Personal Care Products	2
2173176005	CFM Manuel	EPA1694 Personal Care Products	2



SAMPLE SUMMARY

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2173176001	CFM Cemetary	Aqueous Liquid	4/1/2021 12:20	4/2/2021 09:00
2173176002	CFM Billy - 3	Aqueous Liquid	4/1/2021 13:05	4/2/2021 09:00
2173176003	Veronica Shoemaker - 1	Aqueous Liquid	4/1/2021 12:45	4/2/2021 09:00
2173176004	Manuel - 2	Aqueous Liquid	4/1/2021 10:30	4/2/2021 09:00
2173176005	CFM Manuel	Aqueous Liquid	4/1/2021 10:00	4/2/2021 09:00



ANALYTICAL RESULTS

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID: 2173176001	Date Received: 4/2/2021 09:00	Matrix: Aqueous Liquid
Sample ID: CFM Cemetary	Date Collected: 4/1/2021 12:20	

Parameters	Results	Units	PQL	MDL	DF Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	-----	-------------	----	----------	----	------

PCP LC/MS/MS

Analysis Desc: 1694 Personal Care Products

Preparation Method: EPA 1694 Prep

Analytical Method: EPA1694 Personal Care Products

Acetaminophen*	U	ug/L	3.90	2.00	1 4/12/2021 13:16	BFM	4/12/2021 21:33	BFM	
Cotinine (S)	128	%	50-150		1 4/12/2021 13:16	BFM	4/12/2021 21:33	BFM	



ANALYTICAL RESULTS

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID: **2173176002** Date Received: 4/2/2021 09:00 Matrix: Aqueous Liquid
Sample ID: **CFM Billy - 3** Date Collected: 4/1/2021 13:05

Parameters	Results	Units	PQL	MDL	DF Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	-----	-------------	----	----------	----	------

PCP LC/MS/MS

Analysis Desc: 1694 Personal Care Products

Preparation Method: EPA 1694 Prep

Analytical Method: EPA1694 Personal Care Products

Acetaminophen*	U	ug/L	3.90	2.00	1	4/12/2021 13:16	BFM	4/12/2021 22:27	BFM
Cotinine (S)	117	%	50-150		1	4/12/2021 13:16	BFM	4/12/2021 22:27	BFM



ANALYTICAL RESULTS

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID: **2173176003** Date Received: 4/2/2021 09:00 Matrix: Aqueous Liquid
Sample ID: **Veronica Shoemaker - 1** Date Collected: 4/1/2021 12:45

Parameters	Results	Units	PQL	MDL	DF Prepared	By	Analyzed	By	Qual
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PCP LC/MS/MS

Analysis Desc: 1694 Personal Care Products

Preparation Method: EPA 1694 Prep

Analytical Method: EPA1694 Personal Care Products

Acetaminophen*	U	ug/L	3.90	2.00	1 4/12/2021 13:16	BFM	4/12/2021 22:45	BFM	
Cotinine (S)	96.1	%	50-150		1 4/12/2021 13:16	BFM	4/12/2021 22:45	BFM	



ANALYTICAL RESULTS

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID:	2173176004	Date Received:	4/2/2021 09:00	Matrix:	Aqueous Liquid
Sample ID:	Manuel - 2	Date Collected:	4/1/2021 10:30		

Parameters	Results	Units	PQL	MDL	DF Prepared	By	Analyzed	By	Qual
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PCP LC/MS/MS

Analysis Desc: 1694 Personal Care Products

Preparation Method: EPA 1694 Prep

Analytical Method: EPA1694 Personal Care Products

Acetaminophen*	U	ug/L	3.90	2.00	1 4/12/2021 13:16	BFM	4/12/2021 23:03	BFM	
Cotinine (S)	126	%	50-150		1 4/12/2021 13:16	BFM	4/12/2021 23:03	BFM	



ANALYTICAL RESULTS

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID: 2173176005	Date Received: 4/2/2021 09:00	Matrix: Aqueous Liquid
Sample ID: CFM Manuel	Date Collected: 4/1/2021 10:00	

Parameters	Results	Units	PQL	MDL	DF Prepared	By	Analyzed	By	Qual
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PCP LC/MS/MS

Analysis Desc: 1694 Personal Care Products

Preparation Method: EPA 1694 Prep

Analytical Method: EPA1694 Personal Care Products

Acetaminophen*	U	ug/L	3.90	2.00	1 4/12/2021 13:16	BFM	4/12/2021 23:21	BFM
Cotinine (S)	106	%	50-150		1 4/12/2021 13:16	BFM	4/12/2021 23:21	BFM



ANALYTICAL RESULTS QUALIFIERS

Workorder: 2173176

Project ID: City of Ft Myers FIB

PARAMETER QUALIFIERS

PROJECT COMMENTS

2173176 *|non-NELAC



QUALITY CONTROL DATA

Workorder: 2173176

Project ID: City of Ft Myers FIB

QC Batch: HXX/1653 Analysis Method: EPA1694 Personal Care Products
QC Batch Method: EPA 1694 Prep
Associated Lab Samples: 2173176001 2173176002 2173176003 2173176004 2173176005

METHOD BLANK: 222257

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
PCP LC/MS/MS				
Acetaminophen*	ug/L	U	2.00	
Cotinine (S)	%	120	50-150	

LABORATORY CONTROL SAMPLE & LCSD: 222258 222259

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
PCP LC/MS/MS										
Acetaminophen*	ug/L	11.1	13.0	13.1	117	118	50-150	0.77	20	
Cotinine (S)	%				127	126	50-150	0.71	20	

MATRIX SPIKE SAMPLE: 222261 Original: 2173176001

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
PCP LC/MS/MS							
Acetaminophen*	ug/L	0	11.1	13.6	122	50-150	
Cotinine (S)	%				112	50-150	

SAMPLE DUPLICATE: 222260 Original: 2173176001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
PCP LC/MS/MS						
Acetaminophen*	ug/L	U	U	0	20	
Cotinine (S)	%	14.3		0.7	20	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2173176

Project ID: City of Ft Myers FIB

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2173176001	CFM Cemetary	EPA 1694 Prep	HXX/1653	EPA1694 Personal Care Products	HMS/1636
2173176002	CFM Billy - 3	EPA 1694 Prep	HXX/1653	EPA1694 Personal Care Products	HMS/1636
2173176003	Veronica Shoemaker - 1	EPA 1694 Prep	HXX/1653	EPA1694 Personal Care Products	HMS/1636
2173176004	Manuel - 2	EPA 1694 Prep	HXX/1653	EPA1694 Personal Care Products	HMS/1636
2173176005	CFM Manuel	EPA 1694 Prep	HXX/1653	EPA1694 Personal Care Products	HMS/1636



Company Name <u>GHD Services Inc.</u>					LAB ANALYSIS												Requested Turnaround Time		
Address <u>5904 Hampton Oaks Parkway</u>					Pres Codes													Field Filtered (Y/N)	Note: Rush requests subject to acceptance by the laboratory
City <u>Tampa</u> State <u>FL</u> Zip <u>33610</u>																			
Sampling Site Address <u>Fort Myers, FL</u>																			
Attn: <u>Lori Coolidge</u> Email <u>Lori.Coolidge@ghd.com</u>																			
Project Name <u>City of Fort Myers FIB</u> Project # <u>11135752</u>																			
Sampler Name/Signature <u>L. Haverlin / A. Wyatt / [Signature]</u>																	☐ Standard ☒ Expedited Due <u>ASAP</u> / /		
#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont													Comments	
1	CFM Cemetery	04-01-21	1220	SW	3													Verbal Results	
2	CFM Billy - 3	↓	1305	↓	↓													ASAP	
3	Veronica Shoemaker - 1	↓	1245	↓	↓													813-476-9940	
4	Manuel - 2	↓	1030	↓	↓														
5	CFM Manuel	↓	1000	↓	↓														
6																			
7																			
8																			
9																			
0																			

Matrix Codes*		Pres Codes		Relinquished by	Date	Time	Received by	Date	Time
S Soil/Solid Sediment	SW Surface Water	A- none	I- Ice	[Signature] [Signature] [Signature]	04-01-21	1712	[Signature]	4/1/21	1712
GW Ground Water	SL Sludge	B- HNO ₃	O- Other		4/1/21	1900	[Signature]	4/1/21	1900
WW Waste Water	O Other (Please Specify)	C- H ₂ SO ₄	M- MeOH						
DW Drinking Water		D- NaOH	N- Na ₂ S ₂ O ₃						
		E- HCl	Z- ZnAc						
QA/QC level with report None <u>1</u> <u>2</u> <u>3</u> See price guide for applicable fees							[Signature]	4/2/21	900
FDEP Dry Cleaning ☐ FDEP UST Pre-Approval ☐				Temp Control:					
SFWMD ☐ ADaPT ☐ DOT ☐				<u>3.1</u> °C					