December 07, 2018 Service Request No:J1808542

Jimmy Tomazinis
Guana Tolomato Matanzas National Estuarine Research Reserve
505 Guana Rive Road
Ponte Vedra, FL 32082

Laboratory Results for: Guana WQ Sampling

Dear Jimmy,

Enclosed are the results of the sample(s) submitted to our laboratory December 05, 2018
For your reference, these analyses have been assigned our service request number **J1808542.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4406. You may also contact me via email at Mandy.Sullivan@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mandy Sullivan
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

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Client: Guana Tolomato Matanzas National Estuarine Research Reserve **Service Request:**J1808542
Project: Guana WQ Sampling/RQ-2018-12-03-15 **Date Received:**12/5/18
Sample Matrix: Water

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier I data deliverables. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Seven water samples were received for analysis at ALS Environmental on 12/5/18. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Microbiology Analyses:

No significant anomalies were noted with this analysis.

Approved by _____ Date 12/7/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: GTMGR3NUT			Lab ID: J1808542-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Enterococcus	10		10	10	MPN/100mL	ASTM D6503-99
Coliform, Fecal	9.0	B	9.0	9.0	CFU/100mL	SM 9222 D

CLIENT ID: GTMGR1NUT			Lab ID: J1808542-003			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Enterococcus	30		10	10	MPN/100mL	ASTM D6503-99

CLIENT ID: GTMGL2NUT			Lab ID: J1808542-006			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Enterococcus	20		10	10	MPN/100mL	ASTM D6503-99

CLIENT ID: GTMGL1NUT			Lab ID: J1808542-007			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Coliform, Fecal	36	B	9.0	9.0	CFU/100mL	SM 9222 D
Enterococcus	41		10	10	MPN/100mL	ASTM D6503-99

Sample Receipt Information

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Client: Guana Tolomato Matanzas National Estuarine Research Reserve **Service Request:**J1808542
Project: Guana WQ Sampling/RQ-2018-12-03-15

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1808542-001	GTMGR3NUT	12/5/2018	0842
J1808542-002	GTMGRNUT	12/5/2018	0906
J1808542-003	GTMGR1NUT	12/5/2018	0927
J1808542-004	GTMGL4NUT	12/5/2018	1036
J1808542-005	GTMLMNUT	12/5/2018	1102
J1808542-006	GTMGL2NUT	12/5/2018	1129
J1808542-007	GTMGL1NUT	12/5/2018	1157

ALS Environmental

Cooler Receipt Form

Client: Guana Service Request #: J1808542

Project: Guana Lake WQ Shipping paid by ALS? Yes (No) N/A

Cooler received on 12/5/18 and opened on 12/5/18 by BB

COURIER: ALS UPS FEDEX DHL (Client) Other _____ Airbill # _____

1	Were custody seals on outside of cooler?	Yes (No)
	If yes, how many and where?	#:___ on lid other
2	Were seals intact and signature and date correct?	Yes No (N/A)
3	Were custody papers properly filled out?	(Yes) No N/A
4	Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C)	0.0°C
5	Thermometer ID	T2H
6	Temperature Blank Present?	Yes (No)
7	Were Ice or Ice Packs present	(Ice) Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes) No N/A
9	Type of packing material present	Netting Vial Holder Bubble Wrap Paper Styrofoam Other (N/A)
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes) No N/A
11	Did all bottle labels and tags agree with custody papers?	(Yes) No N/A
12	Were the correct bottles used for the tests indicated?	(Yes) No N/A
13	Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below	Yes No (N/A)
14	Were all samples received within analysis holding times?	(Yes) No N/A
15	Were VOA vials free of air bubbles greater than 6mm? If present, note below	Yes No (N/A)
16	Where did the bottles originate?	(ALS) Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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PAGE _____ OF _____

SR# J1808542 5

Girena WQ Sampling

Project Name: Gimme LAKENQ	Project Number: RQ-2018-12-03-15
Project Manager: Jeremy Parrish	Email Address:
Company/Address:	
Phone #	FAX #
Sampler's Signature:	Sampler's Printed Name: James Tomazinis

ANALYSIS REQUESTED (Include Method Number and t

PRESERVATIVE

NUMBER OF CONTAINERS

Enterococci Fecal Coli

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX
GTMGR3NUT		12/5/18	8:42	Liquid
GTMGRNUT			9:06	
GTMGR1NUT			9:27	
GTMGL4NUT			10:36	
GTMLMNUT			11:02	
GTMGL2NUT			11:29	
GTMGL1NUT			11:57	

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SPECIAL I NSTRUCTIONS/COMMENTS

0.0°C

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: James Tomazinis	Printed Name: PAULA BLACKWELL	Printed Name	Printed Name	Printed Name	Printed Name
Firm: FDEP	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 12/5/18 1514	Date/Time: 12.5.18 / 1514	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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Miscellaneous Forms

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FLORIDA DEP DATA QUALIFIERS

B Results based upon colony counts outside the acceptable range.

D Measurement was made in the field.

H Value based on field kit determination; results may not be accurate.

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J Estimated value (one of the following reasons is discussed in the project case narrative).
1. The result may be inaccurate because the surrogate recovery limits have been exceeded.
2. No known quality control criteria exists for the component.
3. The reported value failed to meet the established quality control criteria for either precision or accuracy.
4. The sample matrix interfered with the ability to make any accurate determination (e.g., primary and confirmation results show greater than 40% RPD).
5. The data is questionable because of improper laboratory or field protocols (e.g., GC/MS Tune did not meet method criteria).

K Off scale low. The value is less than the lowest calibration standard but greater than the method reporting limit (MRL).

L Off scale high. The analyte is above the upper limit of the linear calibration range.

M The MDL/MRL has been elevated because the analyte could not be accurately quantified due to matrix interference.

N Presumptive evidence of the analyte. Confirmation was not performed.

Q Sample held beyond the accepted holding time.

T Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only.

U Indicates that the compound was analyzed for but not detected.

V Indicates that the analyte was detected in both the sample and the associated method blank.

Y The laboratory analysis was from an improperly preserved sample.

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

Jacksonville Lab ID # for State Certifications[1]

Agency	Number	Expiration Date
Department of Defense	66206	6/30/2020
Florida Department of Health	E82502	6/30/2019
Georgia Department of Natural Resources	958	6/30/2019
Kentucky Division of Waste Management	123042	6/30/2019
Louisiana Department of Environmental Quality	02086	6/30/2019
Maine Department of Health and Human Services	2017003	2/3/2019
North Carolina Department of Environment and Natural Resources	527	12/31/2018
South Carolina Department of Health and Environmental Control	96021001	6/30/2018
Texas Commission on Environmental Quality	T104704197-18-10	5/31/2019
Virginia Environmental Accreditation Program	460191	12/14/2018

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ACRONYMS

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15		

Sample Name:	GTMGR3NUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-001	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Name:	GTMGRNUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-002	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Name:	GTMGR1NUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-003	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Name:	GTMGL4NUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-004	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15		

Sample Name:	GTMLMNUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-005	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Name:	GTMGL2NUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-006	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Name:	GTMGL1NUT	**Date Collected:**	12/5/18
Lab Code:	J1808542-007	**Date Received:**	12/5/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6503-99		HHERNANDEZ
SM 9222 D		HHERNANDEZ

Sample Results

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Microbiology

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Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 08:42
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGR3NUT	**Basis:**	NA
Lab Code:	J1808542-001		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**9.0**	**B**	CFU/100mL	9.0	9	12/05/18 16:34	
Enterococcus	ASTM D6503-99	**10**		MPN/100mL	10	10	12/05/18 16:32	*

Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 09:06
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGRNUT	**Basis:**	NA
Lab Code:	J1808542-002		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**10**	**BU**	CFU/100mL	10	10	12/05/18 16:51	
Enterococcus	ASTM D6503-99	10	U	MPN/100mL	10	10	12/05/18 16:50	*

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 09:27
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGR1NUT	**Basis:**	NA
Lab Code:	J1808542-003		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**10**	**BU**	CFU/100mL	10	10	12/05/18 16:51	
Enterococcus	ASTM D6503-99	**30**		MPN/100mL	10	10	12/05/18 16:50	*

Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 10:36
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGL4NUT	**Basis:**	NA
Lab Code:	J1808542-004		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**10**	**BU**	CFU/100mL	10	10	12/05/18 17:40	
Enterococcus	ASTM D6503-99	10	U	MPN/100mL	10	10	12/05/18 17:31	*

Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 11:02
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMLMNUT	**Basis:**	NA
Lab Code:	J1808542-005		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**10**	**BU**	CFU/100mL	10	10	12/05/18 17:40	
Enterococcus	ASTM D6503-99	10	U	MPN/100mL	10	10	12/05/18 17:31	*

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 11:29
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGL2NUT	**Basis:**	NA
Lab Code:	J1808542-006		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**10**	**BU**	CFU/100mL	10	10	12/05/18 17:40	
Enterococcus	ASTM D6503-99	**20**		MPN/100mL	10	10	12/05/18 17:31	*

Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	12/05/18 11:57
Sample Matrix:	Water	**Date Received:**	12/05/18 15:14
Sample Name:	GTMGL1NUT	**Basis:**	NA
Lab Code:	J1808542-007		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	**36 B**	CFU/100mL	9.0	9	12/05/18 17:40	
Enterococcus	ASTM D6503-99	**41**	MPN/100mL	10	10	12/05/18 17:31	

QC Summary Forms

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Analytical Report

Client:	Guana Tolomato Matanzas National Estuarine Research Reserve	**Service Request:**	J1808542
Project:	Guana WQ Sampling/RQ-2018-12-03-15	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	J1808542-MB		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Coliform, Fecal	SM 9222 D	1.0	U	CFU/100mL	1.0	1	12/05/18 16:34	
Enterococcus	ASTM D6503-99	1.0	U	MPN/100mL	1.0	1	12/05/18 16:32	