



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

ALS Environmental—Jacksonville Laboratory
9143 Philips Highway, Suite 200, Jacksonville, FL 32256
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www.alsglobal.com

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water

Service Request: J1808542
Date Received: 12/5/18

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 $\leq 6^{\circ}\text{C}$ 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
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Analyte	Results	Flag	MDL	MRL	Units	Method
Enterococcus	10		10	10	MPN/100m L	ASTM D6503-99
Coliform, Fecal	9.0	B	9.0	9.0	CFU/100m L	SM 9222 D

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

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

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



Sample Receipt Information

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

Service Request:J1808542

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
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

Cooler Receipt Form

Client: Guana Service Request #: 31808542
 Project: Guana Lake WP
 Cooler received on 12/5/18 and opened on 12/5/18 by BB Shipping paid by ALS? Yes ☒ No ☐ N/A
 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 1724
- 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

SR#

J1808542

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PAGE OF

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Green WQ Sampling



ANALYSIS REQUESTED (Include Method Number and)

Project Name
Graham LKENDProject Number
RQ-2018-12-03-15

Email Address

Project Manager
Jeremy Parish

Company/Address

Phone #

FAX #

Sampler's Signature
James TomazinisSampler's Printed Name
James Tomazinis

CLIENT SAMPLE ID

LAB ID

DATE

SAMPLING TIME

MATRIX

GTMGR3NUT

12/5/18

8:42

Liquid

GTMGRNUT

9:06

GTMGRNUT

9:27

GTMGRNUT

10:36

GTMGRNUT

11:02

GTMGRNUT

11:29

GTMGRNUT

11:57

NUMBER OF CONTAINERS

PRESERVATIVE

Preservative Key
0. NONE
1. HCL
2. HNO3
3. H2SO4
4. NaOH
5. Zn. Acetate
6. MeOH
7. NaHSO4
8. OtherREMARKS/
ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

TURNAROUND REQUIREMENTS

REPORT REQUIREMENTS

INVOICE INFORMATION

RUSH (SURCHARGES APPLY)

I. Results Only

FO #

STANDARD

II. Results + QC Summaries
(LCS, DUP, MS/MSD as required)

BILL TO:

REQUESTED FAX DATE

III. Results + QC and Calibration
Summaries

REQUESTED REPORT DATE

IV. Data Validation Report with Raw Data

V. Specialized Forms / Custom Report

Edata Yes No



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 Certifications¹

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.

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Analyst Summary report

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

Service Request: J1808542

Sample Name: GTMGR3NUT
Lab Code: J1808542-001
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

Sample Name: GTMGRNUT
Lab Code: J1808542-002
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

Sample Name: GTMGR1NUT
Lab Code: J1808542-003
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

Sample Name: GTMGL4NUT
Lab Code: J1808542-004
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

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dba ALS Environmental

Analyst Summary report

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

Service Request: J1808542

Sample Name: GTMLMNUT
Lab Code: J1808542-005
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

Sample Name: GTMGL2NUT
Lab Code: J1808542-006
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ

Sample Name: GTMGL1NUT
Lab Code: J1808542-007
Sample Matrix: Water

Date Collected: 12/5/18
Date Received: 12/5/18

Analysis Method
ASTM D6503-99
SM 9222 D

Extracted/Digested By

Analyzed By
HHERNANDEZ
HHERNANDEZ



Sample Results

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGR3NUT
Lab Code: J1808542-001

Service Request: J1808542
Date Collected: 12/05/18 08:42
Date Received: 12/05/18 15:14
Basis: NA

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	*

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGRNUT
Lab Code: J1808542-002

Service Request: J1808542
Date Collected: 12/05/18 09:06
Date Received: 12/05/18 15:14

Basis: NA

General Chemistry Parameters

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

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGR1NUT
Lab Code: J1808542-003

Service Request: J1808542
Date Collected: 12/05/18 09:27
Date Received: 12/05/18 15:14

Basis: NA

General Chemistry Parameters

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

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGL4NUT
Lab Code: J1808542-004

Service Request: J1808542
Date Collected: 12/05/18 10:36
Date Received: 12/05/18 15:14
Basis: NA

General Chemistry Parameters

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

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMLMNUT
Lab Code: J1808542-005

Service Request: J1808542
Date Collected: 12/05/18 11:02
Date Received: 12/05/18 15:14
Basis: NA

General Chemistry Parameters

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

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGL2NUT
Lab Code: J1808542-006

Service Request: J1808542
Date Collected: 12/05/18 11:29
Date Received: 12/05/18 15:14

Basis: NA

General Chemistry Parameters

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

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Analytical Report

Client: Guana Tolomato Matanzas National Estuarine Research Reserve
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: GTMGL1NUT
Lab Code: J1808542-007

Service Request: J1808542
Date Collected: 12/05/18 11:57
Date Received: 12/05/18 15:14
Basis: NA

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
Project: Guana WQ Sampling/RQ-2018-12-03-15
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1808542-MB

Service Request: J1808542
Date Collected: NA
Date Received: NA
Basis: NA

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	