



July 26, 2018

Service Request No:J1805309

Sara Armour
Florida Department of Environmental Protection
Bureau of Laboratories
2600 Blair Stone Road
Tallahassee, FL 32399

Laboratory Results for: BMAP 2

Dear Sara,

Enclosed are the results of the sample(s) submitted to our laboratory July 24, 2018
For your reference, these analyses have been assigned our service request number **J1805309**.

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.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gina Bondani
Project Manager

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Table of Contents

CoverLetter	1
Table of Contents	2
Narrative Documents	4
Narrative Documents	5
Hit Summary List	6
Sample Receipt Information	7
Sample Cross-Reference	8
Chain Of Custody	9
Miscellaneous Forms	11
Qualifiers	12
Acronyms	14
Analyst Summary	15
Sample Results	17
Microbiology	18
ASTM D6503-99 - General Chemistry Parameters	
20030695 - Microbiology	19
20030123 - Microbiology	20
SM 9223 B - General Chemistry Parameters	
20030848 - Microbiology	21
20030653 - Microbiology	22
20030753 - Microbiology	23
20030897 - Microbiology	24

Table of Contents (continued)

20030316 - Microbiology	25
QC Summary Forms	26
Microbiology	27
ASTM D6503-99 - General Chemistry Parameters	
Method Blank - Microbiology	28



Narrative Documents

ALS Environmental—Jacksonville Laboratory
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Phone (904) 739-2277 Fax (904) 739-2011
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Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water

Service Request: J1805309
Date Received: 7/24/18

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

7 water samples were received for analysis at ALS Environmental on 7/24/18. 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:

Method SM 9223B (EC Count): Samples J1805309-002, -003, -005, -006, -007 were removed from the incubator and read back on 7/25/18 at 16:19.

Method ASTM D6503-99 (Ent): Samples J1805309-001, -004 were removed from the incubator and read back on 7/25/18 at 16:28.

Approved by  Date 7/26/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 20030695	Lab ID: J1805309-001
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Enterococcus	190		10	10	MPN/100m L	ASTM D6503-99

CLIENT ID: 20030848	Lab ID: J1805309-002
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	272		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030653	Lab ID: J1805309-003
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	85		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030123	Lab ID: J1805309-004
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Enterococcus	190		10	10	MPN/100m L	ASTM D6503-99

CLIENT ID: 20030753	Lab ID: J1805309-005
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	173		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030897	Lab ID: J1805309-006
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	631		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030316	Lab ID: J1805309-007
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	171		10	10	MPN/100m L	SM 9223 B



Sample Receipt Information

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Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19

Service Request:J1805309

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J1805309-001	20030695	7/24/2018	0855
J1805309-002	20030848	7/24/2018	0925
J1805309-003	20030653	7/24/2018	1025
J1805309-004	20030123	7/24/2018	1105
J1805309-005	20030753	7/24/2018	1135
J1805309-006	20030897	7/24/2018	1225
J1805309-007	20030316	7/24/2018	1255

Cooler Receipt Form

Client: FDEP

Service Request #: JB05309

Project: BMAP 2

Shipping paid by ALS?

Cooler received on 7.24.18 and opened on 7.24.18

by KB

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

T124

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

10 Were all bottle labels complete (sample ID, preservation, etc....)?

Paper Styrofoam Other (N/A)
(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?

Yes No (N/A)

HNO₃ pH<2 H₂SO₄ pH<2 ZnAc₂/NaOH pH>9 NaOH pH>12

HCl pH<2

Preservative additions noted below

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:



PAGE 1 OF 1

5

[illegible]

Project Name BMAP 2		Project Number NA 2018-07-16-19		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																									
Project Manager Jeremy Parrish		Email Address jeremy.m.parrish@fl.us		PRESERVATIVE 8																									
Company/Address FDEP				NUMBER OF CONTAINERS E. Coli Enterococci																									
8800 Baymeadow Way W																													
Jacksonville, FL 32256																													
Phone # 904-256-1700		FAX #																											
Sampler's Signature Amy Kalmbacher		Sampler's Printed Name Amy Kalmbacher																											
CLIENT SAMPLE ID		LAB ID		SAMPLING DATE		TIME		MATRIX		REMARKS/ ALTERNATE DESCRIPTION																			
20030695				7-24-18		0855		SW																					
20030848				1		0925		1		X																			
20030653				1		1025		1		X																			
20030123				1		1105		1		X																			
20030753				1		1135		1		X																			
20030897				1		1225		1		X																			
20030316				1		1255		1		X																			
SPECIAL INSTRUCTIONS/COMMENTS 0.0°C																		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 Amy Kalmbacher				Signature AYLA BLACKWELL				Signature				Signature				Signature				Signature									
Printed Name Amy Kalmbacher				Printed Name AYLA BLACKWELL				Printed Name				Printed Name				Printed Name				Printed Name									
Firm FDEP				Firm ALS				Firm				Firm				Firm				Firm									
Date/Time 7-24-2018				Date/Time 7.24.18 B30				Date/Time				Date/Time				Date/Time				Date/Time									



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
Pennsylvania Department of Environmental Protection	68-04835	8/31/2018
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.

ALS Group USA, Corp.

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Analyst Summary report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19

Service Request: J1805309

Sample Name: 20030695
Lab Code: J1805309-001
Sample Matrix: Water

Date Collected: 07/24/18**Date Received:** 07/24/18

Analysis Method
ASTM D6503-99

Extracted/Digested By

Analyzed By
ALANE

Sample Name: 20030848
Lab Code: J1805309-002
Sample Matrix: Water

Date Collected: 07/24/18**Date Received:** 07/24/18

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ALANE

Sample Name: 20030653
Lab Code: J1805309-003
Sample Matrix: Water

Date Collected: 07/24/18**Date Received:** 07/24/18

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ALANE

Sample Name: 20030123
Lab Code: J1805309-004
Sample Matrix: Water

Date Collected: 07/24/18**Date Received:** 07/24/18

Analysis Method
ASTM D6503-99

Extracted/Digested By

Analyzed By
ALANE

Sample Name: 20030753
Lab Code: J1805309-005
Sample Matrix: Water

Date Collected: 07/24/18**Date Received:** 07/24/18

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ALANE

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19

Service Request: J1805309

Sample Name: 20030897
Lab Code: J1805309-006
Sample Matrix: Water

Date Collected: 07/24/18
Date Received: 07/24/18

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ALANE

Sample Name: 20030316
Lab Code: J1805309-007
Sample Matrix: Water

Date Collected: 07/24/18
Date Received: 07/24/18

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ALANE



Sample Results

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dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030695
Lab Code: J1805309-001

Service Request: J1805309
Date Collected: 07/24/18 08:55
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	190	MPN/100mL	10	10	07/24/18 16:13	

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Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030123
Lab Code: J1805309-004

Service Request: J1805309
Date Collected: 07/24/18 11:05
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	190	MPN/100mL	10	10	07/24/18 16:13	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030848
Lab Code: J1805309-002

Service Request: J1805309
Date Collected: 07/24/18 09:25
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	272	MPN/100mL	10	10	07/24/18 15:42	

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Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030653
Lab Code: J1805309-003

Service Request: J1805309
Date Collected: 07/24/18 10:25
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	85	MPN/100mL	10	10	07/24/18 15:42	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030753
Lab Code: J1805309-005

Service Request: J1805309
Date Collected: 07/24/18 11:35
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	173	MPN/100mL	10	10	07/24/18 15:42	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: 20030897
Lab Code: J1805309-006

Service Request: J1805309
Date Collected: 07/24/18 12:25
Date Received: 07/24/18 13:30
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	631	MPN/100mL	10	10	07/24/18 15:42	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water

Sample Name: 20030316
Lab Code: J1805309-007

Service Request: J1805309
Date Collected: 07/24/18 12:55
Date Received: 07/24/18 13:30

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	171	MPN/100mL	10	10	07/24/18 15:42	



QC Summary Forms

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Microbiology

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida DEP
Project: BMAP 2/RQ2018-07-16-19
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1805309-MB

Service Request: J1805309
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	1.0 U	MPN/100mL	1.0	1	07/24/18 16:13	
Escherichia coli	SM 9223 B	1.0 U	MPN/100mL	1.0	1	07/24/18 15:42	