



February 28, 2019

Service Request No:J1901122

Mr. Jeremy Parrish
Florida DEP
7825 Baymeadows Way, Suite 200-B
Jacksonville, FL 32256-7577

Laboratory Results for: BMAP1

Dear Mr.Parrish,

Enclosed are the results of the sample(s) submitted to our laboratory February 26, 2019
For your reference, these analyses have been assigned our service request number **J1901122**.

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
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www.alsglobal.com

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water

Service Request: J1901122
Date Received: 2/26/19

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 2/26/19. 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 ASTM D6503: Sample(s) J1901122 (5, 6) was/were removed from the incubator and read on 2/27/19 at 14:40.

Method SM9223B: Sample(s) J1901122 (1, 2, 3, 4, 7) was/were removed from the incubator and read on 2/27/19 at 13:52.

Approved by  Date 2/28/2019

SAMPLE DETECTION SUMMARY

CLIENT ID: 20030848	Lab ID: J1901122-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	313		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030653	Lab ID: J1901122-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	331		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030760	Lab ID: J1901122-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	676		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030082	Lab ID: J1901122-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	588		10	10	MPN/100m L	SM 9223 B

CLIENT ID: 20030793	Lab ID: J1901122-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Enterococcus	380		10	10	MPN/100m L	ASTM D6503-99

CLIENT ID: 20030958	Lab ID: J1901122-006
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Analyte	Results	Flag	MDL	MRL	Units	Method
Enterococcus	300		10	10	MPN/100m L	ASTM D6503-99

CLIENT ID: 20030891	Lab ID: J1901122-007
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	97		10	10	MPN/100m L	SM 9223 B



Sample Receipt Information

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Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06

Service Request:J1901122

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J1901122-001	20030848	2/26/2019	0855
J1901122-002	20030653	2/26/2019	0940
J1901122-003	20030760	2/26/2019	1030
J1901122-004	20030082	2/26/2019	1050
J1901122-005	20030793	2/26/2019	1120
J1901122-006	20030958	2/26/2019	1135
J1901122-007	20030891	2/26/2019	1200

Cooler Receipt Form

Client: FDEP Service Request #: J1901122
 Project: FDEP-NE ROC Shipping paid by ALS? Yes ☐ No ☒ N/A
 Cooler received on 2/26/19 and opened on 2/26/19 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) | <u>4°C</u> |
| 5 | Thermometer ID | <u>1124</u> |
| 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? | Yes ☐ No ☒ N/A |
| | HNO ₃ pH<2 H ₂ SO ₄ pH<2 ZnAc ₂ /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:



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	12/31/2019
South Carolina Department of Health and Environmental Control	96021001	6/30/2019
Texas Commission on Environmental Quality	T104704197-18-10	5/31/2019
Virginia Environmental Accreditation Program	460191	12/14/2019

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.

dba ALS Environmental

Analyst Summary report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06

Service Request: J1901122

Sample Name: 20030848
Lab Code: J1901122-001
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 20030653
Lab Code: J1901122-002
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 20030760
Lab Code: J1901122-003
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 20030082
Lab Code: J1901122-004
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 20030793
Lab Code: J1901122-005
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
ASTM D6503-99

Extracted/Digested By

Analyzed By
ASOTO

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06

Service Request: J1901122

Sample Name: 20030958
Lab Code: J1901122-006
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
ASTM D6503-99

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 20030891
Lab Code: J1901122-007
Sample Matrix: Water

Date Collected: 02/26/19**Date Received:** 02/26/19

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO



Sample Results

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030793
Lab Code: J1901122-005

Service Request: J1901122
Date Collected: 02/26/19 11:20
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	380	MPN/100mL	10	10	02/26/19 13:24	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030958
Lab Code: J1901122-006

Service Request: J1901122
Date Collected: 02/26/19 11:35
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	300	MPN/100mL	10	10	02/26/19 13:24	

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dba ALS Environmental

Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030848
Lab Code: J1901122-001

Service Request: J1901122
Date Collected: 02/26/19 08:55
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	313	MPN/100mL	10	10	02/26/19 13:45	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030653
Lab Code: J1901122-002

Service Request: J1901122
Date Collected: 02/26/19 09:40
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	331	MPN/100mL	10	10	02/26/19 13:45	

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dba ALS Environmental

Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030760
Lab Code: J1901122-003

Service Request: J1901122
Date Collected: 02/26/19 10:30
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	676	MPN/100mL	10	10	02/26/19 13:45	

ALS Group USA, Corp.
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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030082
Lab Code: J1901122-004

Service Request: J1901122
Date Collected: 02/26/19 10:50
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	588	MPN/100mL	10	10	02/26/19 13:45	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: 20030891
Lab Code: J1901122-007

Service Request: J1901122
Date Collected: 02/26/19 12:00
Date Received: 02/26/19 12:20
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	97	MPN/100mL	10	10	02/26/19 13:45	



QC Summary Forms

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: BMAP1/RQ-2019-02-25-06
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J1901122-MB

Service Request: J1901122
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	1.0 U	MPN/100mL	1.0	1	02/26/19 13:24	
Escherichia coli	SM 9223 B	1.0 U	MPN/100mL	1.0	1	02/26/19 13:45	