



February 20, 2020

Service Request No:J2000924

Mr. Jeremy Parrish
Florida DEP
8800 Baymeadows Way West
Jacksonville, FL 32256-7577

Laboratory Results for: Moses Creek

Dear Mr.Parrish,

Enclosed are the results of the sample(s) submitted to our laboratory February 18, 2020
For your reference, these analyses have been assigned our service request number **J2000924**.

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 with the TNI 2016 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

Candice Turner
Project Management
Assistant

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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: Moses Creek
Sample Matrix: Water

Service Request: J2000924

Date Received: 02/18/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier I level requested by the client.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 02/18/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Microbiology:

Method ASTM D6503-99: Sample(s) J2000924 (3,4) were removed from the incubator and read on 2/19/20 1540.

Method SM 9223 B: Sample(s) J2000924 (1-5) were removed from the incubator and read on 2/19/20 1549.

Approved by Candice Turner

Date 02/20/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: G5NE0026	Lab ID: J2000924-001
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	28.0			1.0	MPN/100m L	SM 9223 B

CLIENT ID: 27010079	Lab ID: J2000924-002
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	866			1.0	MPN/100m L	SM 9223 B

CLIENT ID: G5NE004	Lab ID: J2000924-003
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	144			10	MPN/100m L	SM 9223 B
Enterococcus	190			10	MPN/100m L	ASTM D6503-99

CLIENT ID: G5NE0589	Lab ID: J2000924-004
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	345			10	MPN/100m L	SM 9223 B
Enterococcus	220			10	MPN/100m L	ASTM D6503-99

CLIENT ID: 27010050	Lab ID: J2000924-005
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Analyte	Results	Flag	MDL	MRL	Units	Method
Escherichia coli	153			1.0	MPN/100m L	SM 9223 B



Sample Receipt Information

ALS Environmental—Jacksonville Laboratory
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www.alsglobal.com

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17

Service Request:J2000924

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
J2000924-001	G5NE0026	2/18/2020	0935
J2000924-002	27010079	2/18/2020	1030
J2000924-003	G5NE004	2/18/2020	1110
J2000924-004	G5NE0589	2/18/2020	1125
J2000924-005	27010050	2/18/2020	1155

Cooler Receipt Form

Client: FDEP
Project: Moses Creek

Service Request #: 52000924

Shipping paid by ALS?

Yes ☐ No ☒ N/A

Cooler received on 2/18/2020 and opened on 2/18/2020 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) 0.4°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:



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	6/30/2020
Georgia Department of Natural Resources	958	6/30/2020
Kentucky Division of Waste Management	123042	6/30/2020
Louisiana Department of Environmental Quality	02086	6/30/2020
Maine Department of Health and Human Services	2019004	2/3/2021
New York State Department of Health	12113	4/1/2020
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	T104704197-19-12	5/31/2020
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.

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Analyst Summary report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17

Service Request: J2000924

Sample Name: G5NE0026
Lab Code: J2000924-001
Sample Matrix: Water

Date Collected: 02/18/20**Date Received:** 02/18/20

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: 27010079
Lab Code: J2000924-002
Sample Matrix: Water

Date Collected: 02/18/20**Date Received:** 02/18/20

Analysis Method
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO

Sample Name: G5NE004
Lab Code: J2000924-003
Sample Matrix: Water

Date Collected: 02/18/20**Date Received:** 02/18/20

Analysis Method
ASTM D6503-99
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO
ASOTO

Sample Name: G5NE0589
Lab Code: J2000924-004
Sample Matrix: Water

Date Collected: 02/18/20**Date Received:** 02/18/20

Analysis Method
ASTM D6503-99
SM 9223 B

Extracted/Digested By

Analyzed By
ASOTO
ASOTO

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Florida Department of Environmental Protection (DEP)

Service Request: J2000924

Project: Moses Creek/RQ-2020-02-17-17

Sample Name: 27010050

Date Collected: 02/18/20

Lab Code: J2000924-005

Date Received: 02/18/20

Sample Matrix: Water

Analysis Method

Extracted/Digested By

Analyzed By

SM 9223 B

ASOTO



Sample Results

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Microbiology

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: G5NE004
Lab Code: J2000924-003

Service Request: J2000924
Date Collected: 02/18/20 11:10
Date Received: 02/18/20 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	190	MPN/100mL	10	10	02/18/20 13:55	
Escherichia coli	SM 9223 B	144	MPN/100mL	10	10	02/18/20 14:45	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: G5NE0589
Lab Code: J2000924-004

Service Request: J2000924
Date Collected: 02/18/20 11:25
Date Received: 02/18/20 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Enterococcus	ASTM D6503-99	220	MPN/100mL	10	10	02/18/20 13:55	
Escherichia coli	SM 9223 B	345	MPN/100mL	10	10	02/18/20 14:45	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: G5NE0026
Lab Code: J2000924-001

Service Request: J2000924
Date Collected: 02/18/20 09:35
Date Received: 02/18/20 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	28.0	MPN/100mL	1.0	1	02/18/20 14:45	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: 27010079
Lab Code: J2000924-002

Service Request: J2000924
Date Collected: 02/18/20 10:30
Date Received: 02/18/20 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	866	MPN/100mL	1.0	1	02/18/20 14:45	

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: 27010050
Lab Code: J2000924-005

Service Request: J2000924
Date Collected: 02/18/20 11:55
Date Received: 02/18/20 12:45
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Escherichia coli	SM 9223 B	153	MPN/100mL	1.0	1	02/18/20 14:45	



QC Summary Forms

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Analytical Report

Client: Florida Department of Environmental Protection (DEP)
Project: Moses Creek/RQ-2020-02-17-17
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: J2000924-MB

Service Request: J2000924
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	02/18/20 13:55	
Escherichia coli	SM 9223 B	1.0 U	MPN/100mL	1.0	1	02/18/20 14:45	