## Shaik, Amzad

**From:** Musson, Curtis
**Sent:** Wednesday, April 12, 2017 15:11
**To:** Shaik, Amzad
**Subject:** RQ-2017-04-10-20 Extra Bottles - Metals Analysis

Amzad,

The metals analyses needed for the added bottle is

| | |
|---|---|
| W-ICP | Calcium, Chromium, Iron, Magnesium, Nickel, Potassium, Sodium, Zinc |
| W-ICPMS | Arsenic, Cadmium, Copper, Lead, Silver |

Thanks,

Curtis Musson
Environmental Consultant
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
*2600 Blairstone Rd, MS#3560*
*Tallahassee, FL 32399*
*Curtis.musson@dep.state.fl.us*
*(850) 245-8453*

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## Central Lab Sample Submittal Form

Request Number: 2017-04-10-20
Lake Lafayette Drain, Moriah Creek
Customer: WQ-ASSESS
Project ID: SMP

Requester: Curtis Musson
Collected By: Curtis Musson, Ben Rains

Field Report Prepared By: Curtis Musson
Sampling Agency: FDEP



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**Location:** Moriah Creek 100 meters upstream of Newport Rd.
STORET: G1WA0057
Field ID: Moriah Creek 100 meters upstream of Newport Rd. April 12, 2017 G1WA0057_04122017

☐ Comp ☒ Grab
Collection (comp begin or grab) Date 4/12/17 Time 8:49 Eastern Central
Collection (comp begin or grab) Date — Time —
Bottle Group(s): A, C

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| Fresh | 6.65 | | |
| Temp (C) 17.78 | pH 7.50 | Sample Depts (m) 0.3 | Sp. Conductance (umho/cm) 306 |
| Salinity (ppt) 0.15 | Comments | | |
| Latitude (Decimal Degrees) 30.1857 | | Longitude (Decimal Degrees) -84.1929 | |

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**Location:** Lake Lafayette Drain 250 meters downstream of Weems Rd
STORET: G1WA0007
Field ID: Lake Lafayette Drain 250 meters downstream of Weems Rd April 12, 2017 G1WA0007_04122017

☐ Comp ☒ Grab
Collection (comp begin or grab) Date 4/12/17 Time 13:31 Eastern Central
Collection (comp begin or grab) Date — Time —
Bottle Group(s): A, B, C, D, E

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| Fresh | 8.29 | | |
| Temp (C) 22.19 | pH 7.36 | Sample Depts (m) 0.2 | Sp. Conductance (umho/cm) 161 |
| Salinity (ppt) 0.08 | Comments | | |
| Latitude (Decimal Degrees) 30.4544 | | Longitude (Decimal Degrees) -84.2204 | |

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**Location:**
**Field ID:**
**STORET #:**

☐ Comp ☐ Grab
Collection (comp begin or grab) Date Time Eastern Central
Collection (comp begin or grab) Date Time
Bottle Group(s):

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| | | | |
| Temp (C) | pH | Sample Depts (m) | Sp. Conductance (umho/cm) |
| Salinity (ppt) | Comments | | |
| Latitude (Decimal Degrees) | | Longitude (Decimal Degrees) | |

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| Relinquished By: | Date/Time | Number of Coolers | Received By: | Date/Time |
|---|---|---|---|---|
| Curtis Musson | 4/12/17 / 14:44 | 2 coolers / 7 cat jug | [illegible] | 4-12-17 / 14:44 |

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## Central Lab Sample Submittal Form



**Request Number:** 2017-04-10-20
**Lake Lafayette Drain, Moriah Creek**
**Customer:** WQ-ASSESS
**Project ID:** SMP

**Requester:** Curtis Musson
**Collected By:** Curtis Musson, Ben Raines

**Field Report Prepared By:** Curtis Musson
**Sampling Agency:** FDEP

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**Location:** Moriah Creek 100 meters upstream of Newport Rd.

STORET: G1WA0057

Field ID: Moriah Creek 100 meters upstream of Newport Rd April 12, 2017 G1WA0057_04122017

| | |
|---|---|
| ☐ Comp ☒ Grab | Collection (comp begin or grab) Date 4/12/17 Time 8:49 Eastern Central |
| Collection (comp begin or grab) | Date — Time — |
| Bottle Group(s) | A, C |
| Matrix (Salt, Fresh) | Fresh |
| Diss. Oxygen (mg/L) | 6.65 |
| Temp (C) | 17.78 |
| pH | 7.50 |
| Sample Depts (m) | 0.3 |
| Sp. Conductance (umho/cm) | 306 |
| Salinity (ppt) | 0.15 |
| Comments | |
| Latitude (Decimal Degrees) | 30.1857 |
| Longitude (Decimal Degrees) | -84.1929 |

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**Location:** Lake Lafayette Drain 250 meters downstream of Weems Rd

STORET: G1WA0007

Field ID: Lake Lafayette Drain 250 meters downstream of Weems Rd April 12, 2017 G1WA0007_04122017

| | |
|---|---|
| ☐ Comp ☒ Grab | Collection (comp begin or grab) Date 4/12/17 Time 13:31 Eastern Central |
| Collection (comp begin or grab) | Date — Time — |
| Bottle Group(s) | A B,C,D E |
| Matrix (Salt, Fresh) | Fresh |
| Diss. Oxygen (mg/L) | 8.29 |
| Temp (C) | 22.19 |
| pH | 7.36 |
| Sample Depts (m) | 0.2 |
| Sp. Conductance (umho/cm) | 161 |
| Salinity (ppt) | 0.08 |
| Comments | |
| Latitude (Decimal Degrees) | 30.4544 |
| Longitude (Decimal Degrees) | -84.2204 |

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**Location**

**Field ID**

**STORET #**

| | |
|---|---|
| ☐ Comp ☐ Grab | Collection (comp begin or grab) Date Time Eastern Central |
| Collection (comp begin or grab) | Date Time |
| Bottle Group(s) | |
| Matrix (Salt, Fresh) | |
| Diss. Oxygen (mg/L) | |
| Temp (C) | |
| pH | |
| Sample Depts (m) | |
| Sp. Conductance (umho/cm) | |
| Salinity (ppt) | |
| Comments | |
| Latitude (Decimal Degrees) | |
| Longitude (Decimal Degrees) | |

---

| Relinquished By: | Date/Time | Number of Coolers | Received By: | Date/Time |
|---|---|---|---|---|
| Curtis Musson | 4/12/17 / 14:44 | 2 coolers / 7 Sci Jug | | 4-12-17 / 14:54 |

| Group | Bottle Type | | # of Bottles | Preservative | | Enter Number of Bottles Sent to Lab |
|---|---|---|---|---|---|---|
| A | P-1L | | 2 | ICE | | 2 |
| ALKALINITY<br>TURBIDITY<br>W-CL-IC<br>W-COLOR<br>W-F<br>W-SO4-IC<br>W-TDS<br>W-TSS | | | | | | |
| A | BP-1L | | 2 | ICE | | 2 |
| CHLSUITE-W | | | | | | |
| A | P-500ML | | 2 | ICE And H2SO4 | | 2 |
| W-NH3<br>W-NO2NO3<br>W-S-A-TP<br>W-TKN<br>W-TOC | | | | | | |
| A | P-125ML | | 2 | ICE-FLTR | | 2 |
| W-PO4-F | | | | | | |
| B | P-250ML-WO-THI | | 1 | ICE | | 1 |
| ECOLI-18QT | | | | | | |
| C | PJ-2L | | 4 | Formalin | | 7 |
| MI-FW-QLDC | | | | | | |

| | | | | |
|---|---|---|---|---|
| Group D | W-ICPMS<br>W-ICP | # Bottles<br>ϕ | ~~$H_2SO_4$~~<br>$HNO_3$ | 1 |
| Group E | Algal_ID | ϕ | ICE | 1 |

# RQ-2017-04-10-20



Date of Request: 13-MAR-2017
Created By: MUSSON_C On: 13-MAR-2017
Modified By: MATTHEWS_D On: 23-MAR-2017
Customer: WQ-ASSESS
Project: SMP
Division: Division of Environmental Assessment and Restoration
District:
Sampling Event: Killearn Outlet, Moriah Creek

**Send Coolers To:**

Phone: 850-245-8453
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: Curtis Musson

**Send Final Report To:**

Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: curtis musson

Program Module Number:
Priority: 3
Event Status: S
Criminal Investigation: NO
Chemistry Request Reviewed By: WATTS_J On: 23-MAR-2017
Biology Request Reviewed By: MATTHEWS_D On: 23-MAR-2017
Sampling Kit Required: YES Ship on: 05-APR-2017
Sampling Kit Shipped: YES On: 04-APR-2017
Sampling Kit Packed By: SHAIK_A
Preservatives Needed: NO
Date to Receive Samples: 12-APR-2017
Received By:

Report Type: Final Only
FTP Data: NO
QC Report: YES
Date Log: NO
Authorization Log: NO

Comments: Group A: Freshwater Nutrient Kit
Group B: E. coil
Group C: SCI

Packing Notes:
No FedEx lables needed, sample swill be dropped off.

## Bottle Group A (Water) With 2 Samples:

Bottle Type: P-1L Number of Bottles: 2 Preserved With: ICE

| | | |
|---|---|---|
| ALKALINITY | Template: DEFAULT | (SM 2320 B-97) Alkalinity in aqueous matrices as mg CaCO3/L |
| TURBIDITY | Template: DEFAULT | (EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices |
| W-CL-IC | Template: DEFAULT | (EPA 300.0 Rev. 2.1) Chloride in aqueous matrices |
| W-COLOR | Template: DEFAULT | (SM 2120 B) True Color measured at 450 nm |
| Color (true) | | |
| W-F | Template: DEFAULT | (SM 4500 F-C-97) Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring) |
| W-SO4-IC | Template: DEFAULT | (EPA 300.0 Rev. 2.1) Sulfate in aqueous matrices |
| W-TDS | Template: DEFAULT | (SM 2540 C-97) Total Dissolved Solids in aqueous matrices |
| W-TSS | Template: DEFAULT | (SM 2540 D-97) Total Suspended Solids in aqueous matrices |

Bottle Type: BP-1L Number of Bottles: 2 Preserved With: ICE

| | | |
|---|---|---|
| CHLSUITE-W | Template: DEFAULT | (SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry |

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: ICE And H2SO4

| | | |
|---|---|---|
| W-NH3 | Template: DEFAULT | (EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L |
| W-NO2NO3 | Template: DEFAULT | (EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L |
| W-S-A-TP | Template: DEFAULT | (EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L |
| W-TKN | Template: DEFAULT | (EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices |
| W-TOC | Template: DEFAULT | (SM 5310 B-00) Nonpurgeable Organic Carbon in aqueous matrices |

Bottle Type: P-125ML Number of Bottles: 2 Preserved With: ICE-FLTR

| | | |
|---|---|---|
| W-PO4-F | Template: DEFAULT | (EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L |

## Bottle Group B (Water) With 1 Samples:

Bottle Type: Number of Bottles: 1 Preserved With: ICE

**Bottle Group B (Water) With 1 Samples:**

Bottle Type: Number of Bottles: 1 Preserved With: ICE

ECOLI-18QT Template: DEFAULT (SM 9223 Quanti-Tray) Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems

**Bottle Group C (Biological) With 2 Samples:**

Bottle Type: PJ-2L Number of Bottles: 4 Preserved With: Formalin

MI-FW-QLDC Template: DEFAULT (SOP-IZ06) No. Taxa of FW macroinverts, qual samp, 20 dipnets.

* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

# Log-in Checklist

RQ- 2017-04-10-20

Shipping Method: H D

Date/Time of Receipt: 04-12-17 / 14:04

| Cooler ID | Cooler Temperature* | No. Sample Containers in Cooler | Evidence Tape | | | | Tracking # (fill out only if waybill copy is damaged) |
|---|---|---|---|---|---|---|---|
| | | | Present? | | *Intact? | | |
| | | | Yes | No | Yes | No | |
| | Room temp | 7 | | ✓ | | | QLDC Samples |
| Red | 2-9C | 10 | | ✓ | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*If the temperature of a cooler is above 6.0 °C (or above 10.0 °C for W-1-4-DIOX), or if Evidence Seal is damaged, identify the containers in the affected cooler(s) on back of this form.

****Note:** If "No" is checked in any of the fields below, fill out the back of this form with additional details (Field ID, Test IDs, etc.) and generate an **NCR**.

**Chain of Custody/ Field Sheet(s) Included? Yes ✓ No_____

## CONTAINER CHECK

****Evidence Tape on Bottles?** Yes_____ No ✓ **If yes, is it intact?** Yes_____ No_____

**Caps on tight? Yes ✓ No_____ **Containers intact? Yes ✓ No_____

**Sufficient Sample Volume: Yes ✓ No_____

## CHLORINE CHECK (Blue dot on container)

| Check the Box marked "Yes" or "No" for the Presence of Chlorine. If Cl detected, an NCR is required. | | | | | |
|---|---|---|---|---|---|
| Analysis | Yes | No | Analysis | Yes | No |
| W-1,4 DIOX | | | W-PC-AA-SF | | |
| W-AHERB-AA (-AHB-AA-R) | | | W-PCL-SQ (-R) | | |
| W-BNA (-625, -R) | | | W-PDQUAT | | |
| W-CARB-AA (-CAB-AA-R) | | | W-PESTNP-R | | |
| W-ENDO-AA | | | W-PSCL-TQ | | |
| W-GLYPH | | | W-PSNP-TQ | | |
| W-NP-AA-SF | | | W-PST-CL-R | | |
| W-PAH (-R) | | | W-TR-TQ | | |
| W-PCB-R | | | W-CT-CI-R | | |

## PRESERVATION CHECK (EXCLUDING SAMPLES SENT TO OVERFLOW LABS, "OV-")

**Acid Preserved Samples: pH ≤ 2.0? Yes ✓ No____ NA_____ Init: ABJ

**W-1-4-DIOX (Green dot on container) preserved to pH < 4.0? Yes____ No____ NA ✓ Init: _____

**Coolers Unpacked/Checked by:** ABJ **Date:** 4-12-17 **NCRs (Y/N)?** ✓

**Event ID:** Killearn Outlet, Moriah Creek WQ-ASSESS-2017-04-12-01 (SMP) Date Received: 12-APR-2017 14:04 **NCR #** _____

# Log-in Checklist

**Samples with Incorrect pH Preservation or presence of Chlorine**

| Field ID | Bottle Test ID(s) | pH / Cl | Action Taken |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

**Samples in Coolers with Incorrect Preservation or Damaged Evidence Tape**

| Cooler ID | Field ID | Bottle Test ID(s) |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**Bottles Not Intact**

| Field ID | Bottle Test ID(s) | Loose Cap | Damaged Cap | | Damaged Container | | Evidence Tape Not Intact |
|---|---|---|---|---|---|---|---|
| | | | CK | BR | CK | BR | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Samples with Insufficient Volume for Analyses**

| Field ID | Bottle Test ID(s) | Action Taken |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

## *ENCORE* SAMPLES

**S-VOC-MS samples in Encores must be frozen within 48 hours of collection.**

Were Encore samples received? Yes____ No_____

Date and time placed in freezer _____

Were all samples placed in freezer within 48 hours of collection? Yes_____ No_____

If no, were samples shipped on dry ice? Yes_____ No_____

**FOR CLEAN LAB USE ONLY** – Total Mercury Preservation Check (W-HG-AF; W-HG-AF-F):

Samples preserved within 48 hours? Yes_____ No_____

Date and time samples preserved: _____

**Additional Comments:**