Water Quality Assessment Report (Revision 2)
Miami River Basin
Miami, Florida

PREPARED FOR:

MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES
DIVISION OF ENVIRONMENTAL RESOURCES MANAGEMENT (DERM)
WATER MANAGEMENT
Overtown Transit Village
701 N.W. 1st Court 5th Floor
Miami, FL 33136

PREPARED BY:

WOOD ENVIRONMENTAL & INFRASTRUCTURE SOLUTIONS, INC.
16250 NW 59th Avenue, Suite 206
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Wood Project # 6783-20-3235.04

July 13, 2021

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MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES
DIVISION OF ENVIRONMENTAL RESOURCES MANAGEMENT (DERM)
WATER MANAGEMENT DIVISION
701 N.W. 1ST COURT; 5TH FLOOR
MIAMI, FLORIDA 33136

SUBJECT: **WATER QUALITY ASSESSMENT REPORT (REVISION 2)**
MIAMI RIVER BASIN
MIAMI, FLORIDA
Wood Project Number: 6783-20-3235

Dear Mr. Mario Lopez:

Wood Environment & Infrastructure Solutions, Inc. (Wood) submits the following Water Quality Assessment report for the Miami Dade County Water Management Task Four Assignment for the Miami River Basin located in Miami, Florida. The purpose of the Water Quality Assessment in and along the Miami River Basin is to obtain representative water samples for laboratory analysis and identify possible sources of pollution, which contribute to high concentrations of bacteriological parameters or other parameters of concern in the surface waters of the Miami River Basin.

SITE DESCRIPTION

The site includes approximately 1.8 miles of various water structures and surface water locations in a northwest to southeast direction located along the Miami River Basin in Miami, Florida. The sampling locations are located in mixed-use neighborhoods including residential and commercial areas. **Figure 1** illustrates the sampling locations and sample identifications.

WATER QUALITY SAMPLING

On October 22nd and 23rd, 2020, Wood staff collected 15 water samples for the Miami River Basin project. The sampling order began at the downstream locations and proceeded to the upstream locations. This sampling protocol was guided by the directional flow of the Miami River and to ensure that representative water samples were obtained.

Water samples were collected within 48 hours of a rain event and at low tide, when possible. The sample locations are illustrated in **Figure 1**. Water quality sampling was performed pursuant to the Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOP) for Field Activities (DEP-SOP-001/01) dated January 2017. Samples were collected from the extendable grab sampler and transferred to the appropriate sample containers, sealed, and immediately stored in an ice-filled cooler and delivered within the appropriate hold time under chain-of-custody to Pace Analytical Services LLC, a State of Florida certified laboratory, for analysis.

During the collection of the water samples, field parameters were obtained including, pH, temperature, specific conductance, turbidity, Oxidation-Reduction Potential (ORP), and dissolved oxygen. Each sampling location was inspected for possible potential sources, which may contribute to high concentrations of bacteriological and nutrient pollution. **Attachment A** details the following:

Field Observations

- Sampling Point and Station ID;
- Updated Global Positioning System (GPS) coordinates;
- Field parameters;
- Field observations such as, condition of outfalls, direction of water flow, when possible, and potential sources of contaminants, i.e trash debris, wildlife, dumpsters, markets, etc.

Analytical Results

- Sampling Point and Station ID;
- Updated GPS coordinates;
- Bacteriological Analytical Results (E.Coli and Entero);
- Nutrient Analytical Results (Ammonia-N, Nitrate-Nitrite, Total N, Orthophoshate, and Total P);
- Field observations such as, condition of outfalls, direction of water flow, when possible, and potential sources of contaminants, i.e trash debris, wildlife, dumpsters, markets, etc;
- Review and comments including comparison to water quality standards;
- Recommendations for priority of additional sampling;
- Level of E. Coli, Entero, Total Nitrogen, and Total Phosphorous concentrations.

A photo log of various sampling locations is included in **Attachment B.** Daily equipment calibration logs are illustrated in **Attachment C.**

An explanation for each location can be found in **Attachment A.**

The water samples were submitted for laboratory analysis of bacteriological parameters, Escherichia Coli by Method SM 9223B and Enterococci by Method Enterolet/Quantitray. The analysis of nutrient parameters included, Nitrogen, Ammonia by EPA Method 350.1, Total Kjeldahl Nitrogen by EPA Method 351.2, Nitrogen, Nitrite, and Nitrate by EPA Method 353.2, Orthophosphate as P by EPA Method 365.1, and Phosphorous by EPA Method 365.4.

WATER ANALYTICAL RESULTS

A summary of the water analytical results is presented in **Tables 1 and 2.** The surface water analytical results were compared to the applicable criteria specified in 62-302, and in Chapter 24-42 as specified for ammonia. Given the sample locations, the numeric nutrient criteria for the Southern North Biscayne Bay was used to evaluate nutrient results. The nitrogen criteria for Southern North Biscayne Bay is 290 ug/L, and the phosphorous criteria is 10 ug/L. The following is a summary of the laboratory analytical results:

Bacteriological Parameters:

- *E.Coli:* Ranged from 8 Most Probable Number per milliliter (MPN/100mL) to 4,490 MPN/100mL. Nine locations exhibited E.coli concentrations below 410 MPN/100mL, 5 locations exhibited E.coli concentrations between 410 MPN/100mL and 2,050 MPN/100mL, and 1 location exhibited a concentration above 2,050 MPN/100mL; MRSS1-2 (4,490 MPN/100mL).
- *Enterococci:* Ranged from 63 MPN/100mL to 17,300 MPN/100mL. One location exhibited Enterococci below 130 MPN/100mL, 12 locations exhibited Enterococci concentrations between 130 MPN/100mL and 10,000 MPN/100mL, and 2 locations exhibited concentrations above 10,000 MPN/100mL; including: MRSS1-2 (17,300) and MRSS1-6 (14,100).

Nutrient Parameters:

- *Nitrogen, Ammonia:* Ranged from 35 U microgram per liter (ug/L) to 1,600 ug/L. Ten locations exhibited Nitrogen Ammonia below the Chapter 24-42 criteria of 500 ug/L, four locations exhibited Nitrogen Ammonia between 500 ug/L and 1,000 ug/L, and 1 location exhibited a concentration above 1,000 ug/L; MRSS1-8 (1,600 ug/L).
- *Nitrogen, NO2 plus NO3:* Ranged from 33 U ug/L to 500 ug/L, with a median value of 150ug/L. *Nitrogen Kjeldahl Total*: Ranged from 290 ug/L to 1,600 ug/L, with a median value of 770 ug/L. Total Nitrogen (the sum of *Nitrogen, NO2 plus NO3* and *Nitrogen Kjeldahl Total)* ranged from 480 ug/L to 1617 ug/L. Therefore, all sampling locations exhibited a total nitrogen concentration that exceeded the criteria of 290 ug/L specified as the numeric nutrient criteria for the Southern North Biscayne Bay. One sample location exhibited a Total Nitrogen concentration between 290 ug/L and 580 ug/L, thirteen sampling locations exhibited a Total Nitrogen concentration between 580 ug/L and 1,450 ug/L, and one sample location exhibited a Total Nitrogen concentration above 1,450 ug/L (MRSS1-8 [Manhole] – 1,617 ug/L).

- *Orthophosphate as P*: Ranged from 3.8 U ug/L to 98 ug/L. Five locations exhibited Orthophosphate as P below10 ug/L, 8 locations exhibited Orthophosphate as P between 10 ug/L and 50 ug/L, and 2 locations exhibited concentrations equal to or above 50 ug/L, including: MRSS1-8 (98) and MRSS1-12 (52).
- *Phosphorus, Total:* Ranged from 50 U ug/L to 591 ug/L. Five locations exhibited Phosphorus, Total below or equal to 50 ug/L, 7 locations exhibited Phosphorous, Total between 50 ug/L and 100 ug/L, and 3 locations exhibited concentrations above 100 ug/L; including: MRSS1-7 (160), MRSS1-8 (120) and MRSS1-12 (591).

The laboratory bacteria and nutrient analytical results and chain of custody forms are included in **Attachment D and Attachment E.**

CONCLUSIONS

High, Medium, and Low priorities were designated for each sample locations based on the E. Coli and enterococci concentration levels specified in the scope of work. The maximum level of the primary parameters (E.Coli and enterococci) was used to designate the priority for the sample locations. Additionally, the Total Nitrogen and Orthophosphorous concentrations were characterized by level to provide a secondary basis of water quality characterization. The factor of the water quality standard of 1, 2, 5, 10, 20, and 50 that corresponds to Levels 1-7 for E. Coli was applied to the water quality standards for TN and TP to characterize the levels for nutrient concentrations. Since the method detection limit for Total Phosphorous was 50 ug/L and 3.8 ug/L for Orthophosphorous, Orthophosphorous was used to characterize the phosphorous concentration at the sample locations.

Surface water sample locations were assigned High, Medium, and Low priorities for the E. Coli and enterococci levels 3, 2, and 1, respectively. Stormwater structure sample locations were assigned High, Medium, and Low priorities for E. Coli and enterococci levels above 5, 4 or 5, and 3 or below, respectively.

<u>High Priority Sample Locations:</u>

- MRSS1-1 (Surface Water)
  - <u>Results</u>: *E.Coli*, (8 MPN/100mL), *Enterococci*, (331 MPN/100mL), *Nitrogen, Ammonia,* (181 ug/L), *Nitrogen, NO2 plus NO3,* (220 ug/L), *Nitrogen Kjeldahl, Total,* (920 ug/L), *Orthophosphate as P*, (4.3 ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - <u>Observations:</u> Sample area appeared in good condition. Cargo ship located to NW of sample site. Iguanas present at time of sampling.
- MRSS1-2 (Manhole)
  - <u>Results</u>: *E.Coli*, (4,490 MPN/100mL), *Enterococci*, (17,300 MPN/100mL), *Nitrogen, Ammonia,* (35 U ug/L), *Nitrogen, NO2 plus NO3*, (260 ug/L), *Nitrogen Kjeldahl, Total,* (380 I ug/L), *Orthophosphate as P*, (18 ug/L), and *Phosphorus, Total (as P),* (65 I ug/L).

  - Observations: Thick foam/soapy appearance on surface of water. Pipes fully submerged. Very slight trash debris in MH. Sample area located near Gasolina Orion-gas station. Observed excessive trash and poor conditions to the south of the gas stations. Small flower market located to the east of the gas station property.
- MRSS1-3 (Surface Water)
  - Results: *E.Coli*, (524 MPN/100mL), *Enterococci*, (350 MPN/100mL), *Nitrogen, Ammonia,* (650 ug/L), *Nitrogen, NO2 plus NO3,* (170 ug/L), *Nitrogen Kjeldahl, Total,* (990 ug/L), *Orthophosphate as P*, (5.7 ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Excessive oil sheen on surface of water. Large Cargo ship located directly to the south of the sample location. Smell of petroleum in vicinity NW of sample site. Observed Run Off from an adjoining property located approximately 0.3 miles upstream of sample site. Observed along north side of MR.
- MRSS1-5 (Surface Water)
  - Results: *E.Coli*, (852 MPN/100mL), *Enterococci*, (512 MPN/100mL), *Nitrogen, Ammonia,* (670 ug/L), *Nitrogen, NO2 plus NO3,* (150 ug/L), *Nitrogen Kjeldahl, Total,* (1000 ug/L), *Orthophosphate as P*, (3.8 U ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Fully submerged outfall, submerged by approximately 2' of water. Cloudy white discharge coming out of outfall at time of sampling. Vessels in vicinity of sample area. Observed run off from the rear of a property located on the south side of MR approximately 370 feet from sample site. Property appeared to be Kings Brothers Metal Recycling, junkyard property.
- MRSS1-6 (Catch Basin)
  - Results: *E.Coli*, (240 MPN/100mL), *Enterococci*, (14,100 MPN/100mL), *Nitrogen, Ammonia,* (35 U ug/L), *Nitrogen, NO2 plus NO3,* (38 I ug/L), *Nitrogen Kjeldahl, Total,* (770 ug/L), *Orthophosphate as P*, (13 ug/L), and *Phosphorus, Total (as P),* (56 I ug/L).
  - Observations: Fully submerged pipes. Foamy substance on top of water. Slight trash debris. Scrap metal facility to the North, boat yard to the south. Unkempt surrounding area.
- MRSS1-9 (Surface Water)
  - Results: *E.Coli*, (168 MPN/100mL), *Enterococci*, (332 MPN/100mL), *Nitrogen, Ammonia,* (320 ug/L), *Nitrogen, NO2 plus NO3,* (150 ug/L), *Nitrogen Kjeldahl, Total,* (600 ug/L), *Orthophosphate as P*, (19 ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Partially submerged outfall. Outfall submerged approximately halfway of the 3' discharge point. Algae was observed inside of the pipe. Surface of water appeared with small floating particles. Vessels in direct vicinity of sample area.
- MRSS1-11 (Surface Water)

  - Results: *E.Coli*, (794 MPN/100mL), *Enterococci*, (1,300 MPN/100mL), *Nitrogen, Ammonia,* (330 ug/L), *Nitrogen, NO2 plus NO3,* (150 ug/L), *Nitrogen Kjeldahl, Total,* (540 ug/L), *Orthophosphate as P*, (31 ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Could not locate visible discharge point. Sampled from area closest to proposed coordinates. Observed excessive trash along the northern bank of MR. Pool of trash located downstream of MR, approximately 400' southeast of sampling point. Trash observed stagnant between large vessel and docking wall. Observed small white particles descending from Ferrous Processing & Trading Co Miami. White particles covered water surface. Strong odor coming from processing plant.
- MRSS1-14 (Surface Water)
  - Results: *E.Coli*, (410 MPN/100mL), *Enterococci*, (300 MPN/100mL), *Nitrogen, Ammonia,* (740 ug/L), *Nitrogen, NO2 plus NO3,* (150 ug/L), *Nitrogen Kjeldahl, Total,* (1,100 ug/L), *Orthophosphate as P*, (4.1 ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Sampled from side of fence area. SFWMD on site at time of sampling. Slight vegetation observed in water. Iguanas in area. Excessive trash debris observed stagnant along western curtains and water structures, excessive trash along the banks of MR.
- MRSS1-15 (Surface Water)
  - Results: *E.Coli*, (300 MPN/100mL), *Enterococci*, (305 MPN/100mL), *Nitrogen, Ammonia,* (830 ug/L), *Nitrogen, NO2 plus NO3,* (150 ug/L), *Nitrogen Kjeldahl, Total,* (1,200 ug/L), *Orthophosphate as P*, (3.8 U ug/L), and *Phosphorus, Total (as P),* (50 U ug/L).
  - Observations: Sampled from downstream side of bridge. Slight trash debris observed in water and in surrouding vicinity. Homeless area located on west side of bridge, excessive trash in this area. Palacio Motel Inn to the North, Dmotors holiday to the South. Mobil-gas station NW of sample area.

RECOMMENDATIONS

Wood recommends additional sampling at the high priority locations (**Figure 2**). Recommendations to perform upstream source tracking is warranted at stormwater structures that have exhibited high priority results for previous sampling events.

Based on the field observations made during the sampling activities, maintenance of the following structures is recommended: MRSS1-4 and MRSS1-7 (**Figure 1**). Additionally, an apparent illicit connection is present to the southeast of MRSS1-10, from what appears to be a hose that enters Miami River. A photo of the connection (Photo#62 and 63) is provided in **Attachment B**.

If you require additional information, please contact Ashok Aitharaju at (305) 818-8478 or ashok.aitharaju@woodplc.com.

Sincerely,
WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

Stephen Hanks, P.E.
Senior Engineer

Ricardo Fraxedas, P.E.
Chief Engineer

Ashok K. Aitharaju
Project Manager

Enclosures: Tables, Figures, Attachments A-E

Distributions: Addressee (1 with pdf)

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CERTIFICATION OF PROFESSIONAL ENGINEER

WATER QUALITY ASSESSMENT REPORT
MIAMI RIVER BASIN
MIAMI, FLORIDA

WOOD PROJECT NUMBER 6783-20-3235.04

JULY 13, 2021

I, Stephen Hanks, P.E. No. 72253, certify that I currently hold an active license in the state of Florida and am competent through education or experience to provide a professional judgement that components of the ***WATER QUALITY ASSESSMENT REPORT*** are in general accordance with the requirements set forth in Chapter 24 of the Miami-Dade County Code. I further certify that, this report was prepared under my responsible charge and that Wood Environment & Infrastructure Solutions, Inc. holds an active certificate of authorization (State of Florida # 5392) to provide environmental consulting and engineering services in the State of Florida.

DocuSigned by:

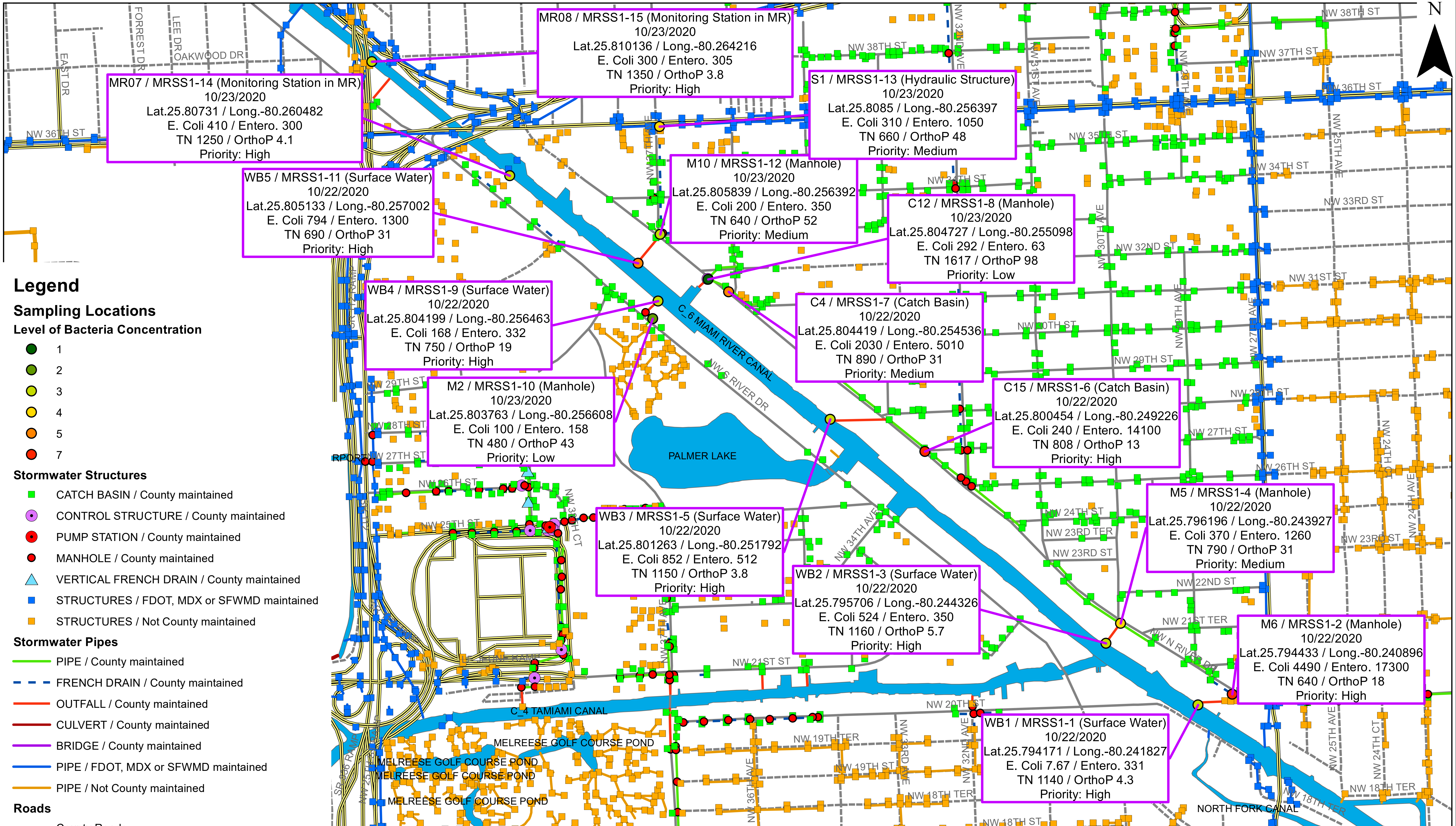
DocuSigned by:
F0D23E906FA4467...

Stephen Hanks, P. E.
State of Florida No.72253
Date: 7/22/2021

Wood Environment &
Infrastructure Solutions, Inc.
16250 NW 59th Avenue, Suite 206
Miami Lakes, Florida 33014

This item has been digitally signed and sealed by Stephen Hanks, Florida PE 72253, using a digital signature on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

FIGURES



Legend

Sampling Locations

Level of Bacteria Concentration

- 1
- 2
- 3
- 4
- 5
- 7

Stormwater Structures

- CATCH BASIN / County maintained
- CONTROL STRUCTURE / County maintained
- PUMP STATION / County maintained
- MANHOLE / County maintained
- VERTICAL FRENCH DRAIN / County maintained
- STRUCTURES / FDOT, MDX or SFWMD maintained
- STRUCTURES / Not County maintained

Stormwater Pipes

- PIPE / County maintained
- FRENCH DRAIN / County maintained
- OUTFALL / County maintained
- CULVERT / County maintained
- BRIDGE / County maintained
- PIPE / FDOT, MDX or SFWMD maintained
- PIPE / Not County maintained

Roads

- County Roads
- State Roads
- Not County Roads
- Undeveloped or Unknown Roads
- Water Surface Extents

0 400 800 1,600 Feet

1 inch = 800 feet

Note: The bacteriological results are presented in MPN/100 mL, and the nutrient results are presented in ug/L

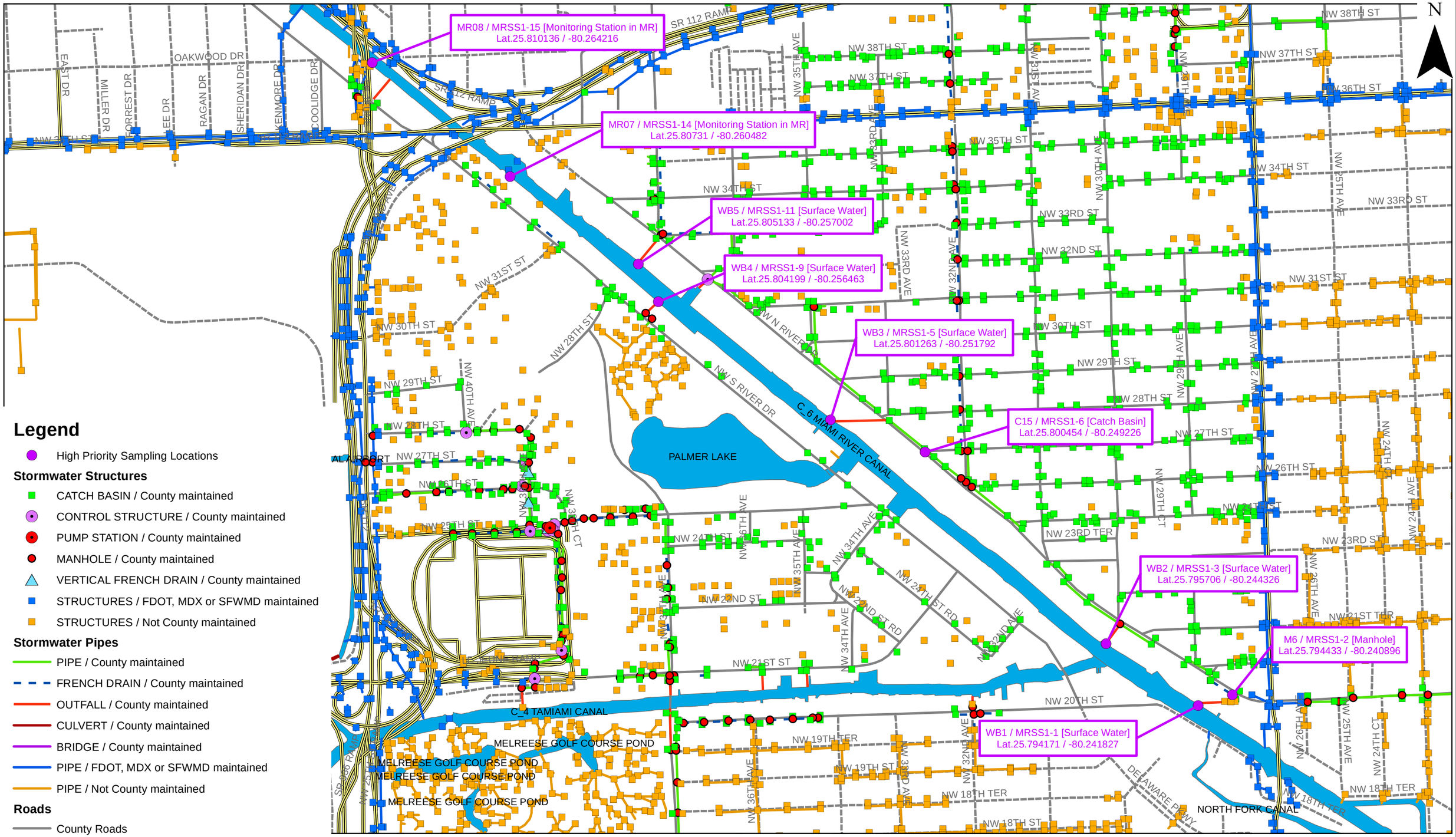
Drawn	Date
SJH	7/7/2021
Checked	Date
AKA	7/7/2021

wood.
Miami, Florida
Project Number
6783-20-3235

Miami Dade County
Division of Environmental Resources Management (DERM)
MIAMI RIVER BASIN
OCTOBER 2020
WATER QUALITY ASSESSMENT

Figure 1

Sampling Locations



Legend

- High Priority Sampling Locations

Stormwater Structures

- CATCH BASIN / County maintained
- CONTROL STRUCTURE / County maintained
- PUMP STATION / County maintained
- MANHOLE / County maintained
- VERTICAL FRENCH DRAIN / County maintained
- STRUCTURES / FDOT, MDX or SFWMD maintained
- STRUCTURES / Not County maintained

Stormwater Pipes

- PIPE / County maintained
- FRENCH DRAIN / County maintained
- OUTFALL / County maintained
- CULVERT / County maintained
- BRIDGE / County maintained
- PIPE / FDOT, MDX or SFWMD maintained
- PIPE / Not County maintained

Roads

- County Roads
- State Roads
- Not County Roads
- Undeveloped or Unknown Roads
- Water Surface Extents

0 400 800 1,600 Feet

1 inch = 800 feet

Drawn	Date
SJH	4/17/2021
Checked	Date
AKA	4/17/2021

wood.

Miami, Florida
Project Number
6783-20-3235

Miami Dade County
Division of Environmental Resources Management (DERM)
MIAMI RIVER BASIN
OCTOBER 2020
WATER QUALITY ASSESSMENT

Figure 2

High Priority Sampling Locations

TABLES

Table 1
MDC Miami River Stormwater Analytical Summary
Wood Project# 6783-20-3235

Sample			E.coli	Enterococci
Location	Point	Date	(MPN/100mL)	(MPN/100mL)
MRSS1-1	WB1	10/22/2020	**331**	**181**
MRSS1-2	M6	10/22/2020	**4490**	**17300**
MRSS1-3	WB2	10/22/2020	**524**	**350**
MRSS1-4	M5	10/22/2020	**370**	**1260**
MRSS1-5	WB3	10/22/2020	**852**	**512**
MRSS1-6	C15	10/22/2020	**240**	**14100**
MRSS1-7	C4	10/22/2020	**2030**	**5010**
MRSS1-8	C12	10/23/2020	**292**	**63.0**
MRSS1-9	WB4	10/22/2020	**168**	**332**
MRSS1-10	M2	10/23/2020	**100**	**158**
MRSS1-11	WB5	10/22/2020	**794**	**1300**
MRSS1-12	M10	10/23/2020	**200**	**350**
MRSS1-13	S1	10/23/2020	**310**	**1050**
MRSS1-14	MR07	10/23/2020	**410**	**231**
MRSS1-15	MR08	10/23/2020	**300**	**305**

Notes:
U - Compound was analyzed but not detected above MDL
MDL - Method Detection Limit

Table 2
MDC Miami River Stormwater Analytical Summary
Wood Project# 6783-20-3235

Sample			Nitrogen, Ammonia	Nitrogen, Kjeldahl, Total	Nitrogen, NO2 plus NO3	Total Nitrogen*	Orthophosphate as P	Phosphorus, Total (as P)
Location	**Point**	**Date**	**(ug/L)**	**(ug/L)**	**(ug/L)**	**(ug/L)**	**(ug/L)**	**(ug/L)**
MRSS1-1	WB1	10/22/2020	**480**	**920**	**220**	**1140**	**4.3**	50 U
MRSS1-2	M6	10/22/2020	35 U	**380 I**	**260**	**640**	**18**	**65 I**
MRSS1-3	WB2	10/22/2020	**650**	**990**	**170**	**1160**	**5.7**	50 U
MRSS1-4	M5	10/22/2020	**41 I**	**290 I**	**500**	**790**	**31**	50 U
MRSS1-5	WB3	10/22/2020	**670**	**1000**	**150**	**1150**	3.8 U	50 U
MRSS1-6	C15	10/22/2020	35 U	**770**	**38 I**	**808**	**13**	**56 I**
MRSS1-7	C4	10/22/2020	**180**	**820**	**70**	**890**	**31**	**160**
MRSS1-8	C12	10/23/2020	**1600**	**1600**	**33 U**	**1617**	**98**	**120**
MRSS1-9	WB4	10/22/2020	**320**	**600**	**150**	**750**	**19**	50 U
MRSS1-10	M2	10/23/2020	**59**	**320 I**	**160**	**480**	**43**	**55 I**
MRSS1-11	WB5	10/22/2020	**330**	**540**	**150**	**690**	**31**	50 U
MRSS1-12	M10	10/23/2020	**400**	**510**	**130**	**640**	**52**	**59 I**
MRSS1-13	S1	10/23/2020	**140**	**330 I**	**330**	**660**	**48**	**58 I**
MRSS1-14	MR07	10/23/2020	**740**	**1100**	**150**	**1250**	**4.1**	50 U
MRSS1-15	MR08	10/23/2020	**830**	**1200**	**150**	**1350**	3.8 U	50 U

Notes:
U - Compound was analyzed but not detected above MDL
I - Compound was observed between the MDL and the PQL
MDL - Method Detection Limit
PQL - Practical Quantification Limit
* - Total Nitrogen is the summation of NO3+NO2 and Total Kjeldahl Nitrogen

ATTACHMENT A

FIELD OBSERVATION & ANALYTICAL RESULTS DATABASES

Miami River Storm Sewer System Field Measurements for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Maintained By	TTRRSS	Location & Comments	Proposed Longitude	Proposed Latitude	Actual Longitude	Actual Latitude	Ph	Temp (C)	Conductivity (US/CM)	ORP	%DO	D.O. (MG/L)	Turbidity (NTU)	Observations	Potential Sources of Contamination
1	WB1	MRSS1-1	Surface Water	County Outfall	534128	WB1 is a discharge point from a County major outfall. It is along the northern edge of MR, at the approximate intersection of NW 20 Street and NW 29 Avenue.	-80.241891	25.794232	-80.241827	25.794171	7.67	25.95	508	-56.6	87.2	7.08	3.41	Sample area appeared in good condition. Cargo ship located to NW of sample site. Iguanas present at time of sampling.	Iguanas and vessels located in the vicinity.
2	M6	MRSS1-2	Manhole	County	534128	M6 is immediately south of NW North River Drive and it is the first manhole (MH) along the French Drain from the northwest. It is west of NW 27 Avenue. There is a MH M1 located immediately southeast of M6. Ensure that samples are collected only from M6 since it is connected to the outfall to the river.	-80.240896	25.794433	-80.240896	25.794433	7.33	27.25	483	-44	40	3.15	12.3	Thick foam/soapy appearance on surface of water. Pipes fully submerged. Very slight trash debris in MH. Sample area located near Gasolina Orion-gas station. Observed excessive trash and poor conditions to the south of the gas stations. Small flower market located to the east of the gas station property.	Pollution from nearby gas station and junkyard property to the south.
3	WB2	MRSS1-3	Surface Water	County Outfall	534128	WB2 is a discharge point from a County major outfall along the northern edge of MR. It is south of NW North River Drive and it is slightly west of an approximate extension of NW 30 Avenue.	-80.244328	25.795704	-80.244326	25.795706	7.55	27.2	868	-138.1	36.1	2.87	2.81	Excessive oil sheen on surface of water. Large Cargo ship located directly to the south of the sample location. Smell of petroleum in vicinity NW of sample site. Observed Run Off from an adjoining property located approximately 0.3 miles upstream of sample site. Observed along north side of MR.	Pollution form vessels located in vicinity. Junkyard located to the north of the sample site.
4	M5	MRSS1-4	Manhole	County	534128	M5 is in the immediate south of NW North River Drive, and slightly east of NW 30 Avenue.	-80.243937	25.796185	-80.2439267	25.7961955	7.21	26.63	379	-56	33	2.66	8.63	of sampling. Excessive trash debris in MH. Five Star Complete Auto Paint loctaed directly to the South. Metal	Trash debris. General vicinity appeared unkempt. MH within an industrial use area.
5	WB3	MRSS1-5	Surface Water	County Outfall	534128	WB3 is a discharge point from a County major outfall on the northen edge of MR and south of NW North River Drive. It is west of NW 33 Avenue.	-80.251669	25.801227	-80.251792	25.801263	7.59	25.97	448	-45.6	33	2.68	2.9	Fully submerged outfall, submerged by approximately 2' of water. Cloudy white discharge coming out of outfall at time of sampling. Vessels in vicinity of sample area. Observed run off from the rear of a property located on the south side of MR approximately 370 feet from sample site. Property appeared to be Kings Brothers Metal Recycling, junkyard property.	Vessels in surrounding area. Unsolicited run off from nearby property located to the southwest of sample area. Appeared to be coming from a junkyard property in close proximity to Kings Brothers Metal Recycling.
6	C15	MRSS1-6	Catch Basin	County	534128	C15 is a Catch Basin (CB) located on the intersection of NW North River Drive and NW 27 Street on the northern side.	-80.249238	25.800528	-80.249226	25.800454	8.06	25.58	213	-31	52	4.3	15	Fully submerged pipes. Foamy substance on top of water. Slight trash debris. Scrap metal facility to the North, boat yard to the south. Unkempt surrounding area.	Unkempt surrounding area. Trash debris from adjoining properties.

Miami River Storm Sewer System Field Measurements for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Maintained By	TTRRSS	Location & Comments	Proposed Longitude	Proposed Latitude	Actual Longitude	Actual Latitude	Ph	Temp (C)	Conductivity (US/CM)	ORP	%DO	D.O. (MG/L)	Turbidity (NTU)	Observations	Potential Sources of Contamination
7	C4	MRSS1-7	Catch Basin	County	534128	C4 is the only CB in the north of NW North River Drive and west of NW 36 Avenue. C4 is immediately north of NW North River Drive.	-80.254621	25.804542	-80.254536	25.804419	7.24	25.18	176	-34.2	40.4	3.32	50.5	Excessive trash debris. Pipes full submerged. Dandy Sand located to the north, junkyard located to the south, tire center located to the east, and cargo container yard located to the northwest.	Trash debris located inside MH and general surrounding in poor condition.
8	C12	MRSS1-8	Manhole	County	534128	C12 is a county manhole located directly southwest of C13.	-80.25422	25.805022	-80.255098	25.804727	6.71	28.19	584	-91	11.1	0.86	5.71	Slight trash debris. Pipes fully submerged. Dandy Sand located to the SE, Maritime Agency located to the West, Antillean located to the East.	No obvious sources of pollution at time of sampling. General area unkempt.
9	WB4	MRSS1-9	Surface Water	County Outfall	534128	WB4 is a discharge point from a County outfall discharge point located along the south edge of MR and north of NW South River Drive. It is east of NW 28 Steet.	-80.256463	25.804199	-80.256463	25.804199	7.57	17.9	630	-116	17.9	1.42	2.25	Partially submerged outfall. Outfall submerged approximately halfway of the 3' discharge point. Algae was observed inside of the pipe. Surface of water appeared with small floating particles. Vessels in direct vicinity of sample area.	Vessels in surrounding area.
10	M2	MRSS1-10	Manhole	County	534128	M2 is located immediately north of NW South River Drive and south of MR. It is on the approximate extension of NW 37 Avenue from the north. There is a MH M3, northwest of this MH. M3 is the beginning of a County outfall.	-80.256628	25.803766	-80.2566085	25.803763	7.16	27.41	471	-63.9	21.4	1.69	8.23	Pipe direction appeared going to the south and west direction. Water flowing south. Slight organic odor. Bricks and concrete debris observed. Water clear, bottom of structure visible. Observed a water hose discharging from BettyK Liner property, visible floody in surrounding area.	No obvious sources of contaminants, except for Betty K Liner discharging water from property.
11	WB5	MRSS1-11	Surface Water	County Outfall	534128	WB5 is a discharge point from a County major outfall along the northern edge of MR, and it is south of NW North River Drive. It will be slightly to the west if you extend NW 37 Avenue.	-80.256978	25.805179	-80.257002	25.805133	7.55	29.33	304	-206.6	27.6	2.09	9.12	Could not locate visible discharge point. Sampled from area closest to proposed coordinates. Observed excessive trash along the northern bank of MR. Pool of trash located downstream of MR, approximately 400' southeast of sampling point. Trash observed stagnant between large vessel and docking wall. Observed small white particles descending from Ferrous Processing & Trading Co Miami. White particles covered water surface. Strong odor coming from processing plant.	Various trash debris located along bank of MR. Ferrous Processing & Trading Co Miami (white particles from processing equipment & strong odor), vessels in the vicinity.

Miami River Storm Sewer System Field Measurements for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Maintained By	TTRRSS	Location & Comments	Proposed Longitude	Proposed Latitude	Actual Longitude	Actual Latitude	Ph	Temp (C)	Conductivity (US/CM)	ORP	%DO	D.O. (MG/L)	Turbidity (NTU)	Observations	Potential Sources of Contamination
12	M10	MRSS1-12	Manhole	County	534128	M10 is in the northeast corner of NW 37 Avenue and NW 33 Street. A pipe for a major outfall begins at this MH. There is a manhole just east of M10. Ensure that the samples are collected from M10 since it is connected to the outfall.	-80.256366	25.805838	-80.256392	25.805839	7.2	27.23	525	-127	14.3	1.13	3.66	Pipes fully submerged. No debris observed in or around the surrounding area of MH.	No obvious sources of contaminants observed at the time of sampling.
13	S1	MRSS1-13	Hydraulic Structure	FDOT discharging to County MS4	534128	S1 is in the southeast corner of NW 36 Street and NW 37 Avenue.	-80.256407	25.808506	-80.256397	25.8085	7.13	26.26	340	-61	30.1	2.4	3.39	Water flowing west towards MR. No visible trash debris in structure. MH directly east of structure contained various trash debris. Excessive amounts of trash debris observed in and around the eastern and western french drains located at the south side of the intersection of NW 36th St and NW 37th Ave. Casino located to the SW, Pinnacle Plaza located to the east, Auto shop located to the NW. Various trash debris located around bus stop area.	Trash debris observed around bust stop area.
14	MR07	MRSS1-14	Monitoring Station in MR	Bayrun Monitoring Station	534128	MR07 is along MR and south of NW North River Drive. It is between NW 36 Street andNW 34 Street. It is approximately west of NW 38 Avenue.	-80.260177	25.807279	-80.2604823	25.8073103	7.01	26.27	489	-66.9	22.6	1.81	2.45	Sampled from side of fence area. SFWMD on site at time of sampling. Slight vegetation observed in water. Iguanas in area. Excessive trash debris observed stagnant along western curtains and water structures, excessive trash	Excessive iguanas in area. Trash debris likely flowing from upstream getting stuck in water structures and pushed on the outerbanks of MR.
15	MR08	MRSS1-15	Monitoring Station in MR	Bayrun Monitoring Station	534128	MR08 is on the east of the intersection of NW 42 Avenue and Miami River. Collect samples from the NW 42 Avenue Bridge on the downstream side of the MR. Document the correct Latitude and Longitude of the collection site.	-80.264131	25.810207	-80.264216	25.810136	NA	NA	NA	NA	NA	NA	NA	Sampled from downstream side of bridge. Slight trash debris observed in water and in surrouding vicinity. Homeless area located on west side of bridge, excessive trash in this area. Palacio Motel Inn to the North, Dmotors holiday to the South. Mobil-gas station NW of sample area.	Trash from surrounding properties.

Miami River Storm Sewer System Sampling Results for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Actual Longitude	Actual Latitude	Date Sampled	E.Coli MPN/100mL	Enterococci MPN/100mL	Ammonia Nitrogen (ug/L)	Nitrate Nitrite (ug/L)	Total Kjeldahl Nitrogen (TKN) (ug/L)	Total Nitrogen (ug/L)	Orthophosphate (ug/L)	Total Phosphorous (ug/L)	Field Observations	Potential Sources of Contamination	Review & Comments	Recommendations	Structure Type	SW Priority	MH Priority	Max Level Bacteria	Max Level Nutrients	E.coli Level	Entero Level	TN Level	OrthoP Level
1	WB1	MRSS1-1	Surface Water	-80.241827	25.794171	10/22/2020	7.67	331	181	220	920	1140	4.3	50 U	Sample area appeared in good condition. Cargo ship located to NW of sample site. Iguanas present at time of sampling.	Iguanas and vessels located in the vicinity.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen that exceeded the numeric nutrient criteria of 290 ug/L for the south segment of North Biscayne Bay.	High	SW	High	Medium	3	3	1	3	3	1
2	M6	MRSS1-2	Manhole	-80.240896	25.794433	10/22/2020	4490	17300	35 U	260	380 I	640	18	65 I	Thick foam/soapy appearance on surface of water. Pipes fully submerged. Very slight trash debris in MH. Sample area located near Gasolina Orion-gas station. Observed excessive trash and poor conditions to the south of the gas stations. Small flower market located to the east of the gas station property.	Pollution from nearby gas station and junkyard property to the south.	All regulated parameters were above the applicable surface water quality standards, with the exception of Ammonia.	High	MH	High	High	7	3	5	7	3	2
3	WB2	MRSS1-3	Surface Water	-80.244326	25.795706	10/22/2020	524	350	650	170	990	1160	5.7	50 U	Excessive oil sheen on surface of water. Large Cargo ship located directly to the south of the sample location. Smell of petroleum in vicinity NW of sample site. Observed Run Off from an adjoining property located approximately 0.3 miles upstream of sample site. Observed along north side of MR.	Pollution from vessels located in vicinity. Junkyard located to the north of the sample site.	All regulated parameters were above the applicable surface water quality standards, with the exception of Orthophosphorous.	High	SW	High	Medium	3	3	2	3	3	1
4	M5	MRSS1-4	Manhole	-80.2439267	25.7961955	10/22/2020	370	1260	41 I	500	290 I	790	31	50 U	Pipes fully submerged at time of sampling. Excessive trash debris in MH. Five Star Complete Auto Paint loctaed directly to the South. Metal shop and Auto center loctaed to the North.	Trash debris. General vicinity appeared unkempt. MH within an industrial use area.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	Medium	MH	High	Medium	4	3	1	4	3	3
5	WB3	MRSS1-5	Surface Water	-80.251792	25.801263	10/22/2020	852	512	670	150	1000	1150	3.8 U	50 U	Fully submerged outfall, submerged by approximately 2' of water. Cloudy white discharge coming out of outfall at time of sampling. Vessels in vicinity of sample area. Observed run off from the rear of a property located on the south side of MR approximately 370 feet from sample site. Property appeared to be Kings Brothers Metal Recycling, junkyard property.	Vessels in surrounding area. Unsolicited run off from nearby property located to the southwest of sample area. Appeared to be coming from a junkyard property in close proximity to Kings Brothers Metal Recycling.	All regulated parameters were above the applicable surface water quality standards, with the exception of Orthophosphorous	High	SW	High	Medium	3	3	3	3	3	1
6	C15	MRSS1-6	Catch Basin	-80.249226	25.800454	10/22/2020	240	14100	35 U	38 I	770	808	13	56 I	Fully submerged pipes. Foamy substance on top of water. Slight trash debris. Scrap metal facility to the North, boat yard to the south. Unkempt surrounding area.	Unkempt surrounding area. Trash debris from adjoining properties.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	High	MH	NA	High	7	3	1	7	3	2
7	C4	MRSS1-7	Catch Basin	-80.254536	25.804419	10/22/2020	2030	5010	180	70	820	890	31	160	Excessive trash debris. Pipes full submerged. Dandy Sand located to the north, junkyard located to the south, tire center located to the east, and cargo container yard located to the northwest.	Trash debris located inside MH and general surrounding in poor condition.	All regulated parameters were above the applicable surface water quality standards, with the exception of Ammonia.	Medium	MH	High	Medium	5	3	3	5	3	3
8	C12	MRSS1-8	Manhole	-80.255098	25.804727	10/23/2020	292	63	1600	33 U	1600	1617	98	120	Slight trash debris. Pipes fully submerged. Dandy Sand located to the SE, Maritime Agency located to the West, Antillean located to the East.	No obvious sources of pollution at time of sampling. General area unkempt.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay, and Ammonia which exceeds the Chapter 24-42 criteria of 500 ug/L.	Low	MH	Low	Low	1	4	1	1	4	4
9	WB4	MRSS1-9	Surface Water	-80.256463	25.804199	10/22/2020	168	332	320	150	600	750	19	50 U	Partially submerged outfall. Outfall submerged approximately halfway of the 3' discharge point. Algae was observed inside of the pipe. Surface of water appeared with small floating particles. Vessels in direct vicinity of sample area.	Vessels in surrounding area.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	High	SW	High	Medium	3	3	1	3	3	2

Miami River Storm Sewer System Sampling Results for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Actual Longitude	Actual Latitude	Date Sampled	E.Coli MPN/100mL	Enterococci MPN/100mL	Ammonia Nitrogen (ug/L)	Nitrate Nitrite (ug/L)	Total Kjeldahl Nitrogen (TKN) (ug/L)	Total Nitrogen (ug/L)	Orthophosphate (ug/L)	Total Phosphorous (ug/L)	Field Observations	Potential Sources of Contamination	Review & Comments	Recommendations	Structure Type	SW Priority	MH Priority	Max Level Bacteria	Max Level Nutrients	E.coli Level	Entero Level	TN Level	OrthoP Level
10	M2	MRSS1-10	Manhole	-80.2566085	25.803763	10/23/2020	100	158	59	160	320 I	480	43	55 I	Pipe direction appeared going to the south and west direction. Water flowing south. Slight organic odor. Bricks and concrete debris observed. Water clear, bottom of structure visible. Observed a water hose discharging from BettyK Liner property, visible floody in surrounding area.	No obvious sources of contaminants, except for Betty K Liner discharging water from property.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	Low	MH	Medium	Low	2	3	1	2	2	3
11	WB5	MRSS1-11	Surface Water	-80.257002	25.805133	10/22/2020	794	1300	330	150	540	690	31	50 U	Could not locate visible discharge point. Sampled from area closest to proposed coordinates. Observed excessive trash along the northern bank of MR. Pool of trash located downstream of MR, approximately 400' southeast of sampling point. Trash observed stagnant between large vessel and docking wall. Observed small white particles descending from Ferrous Processing & Trading Co Miami. White particles covered water surface. Strong odor coming from processing plant.	Various trash debris located along bank of MR. Ferrous Processing & Trading Co Miami (white particles from processing equipment & strong odor), vessels in the vicinity.	All regulated parameters were above the applicable surface water quality standards, with the exception of Ammonia.	High	SW	High	Medium	5	3	2	5	3	3
12	M10	MRSS1-12	Manhole	-80.256392	25.805839	10/23/2020	200	350	400	130	510	640	52	591	Pipes fully submerged. No debris observed in or around the surrounding area of MH.	No obvious sources of contaminants observed at the time of sampling.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	Medium	MH	High	Medium	3	4	1	3	3	4
13	S1	MRSS1-13	Hydraulic Structure	-80.256397	25.8085	10/23/2020	310	1050	140	330	330 I	660	48	58 I	Water flowing west towards MR. No visible trash debris in structure. MH directly east of structure contained various trash debris. Excessive amounts of trash debris observed in and around the eastern and western french drains located at the south side of the intersection of NW 36th St and NW 37th Ave. Casino located to the SW, Pinnacle Plaza located to the east, Auto shop located to the NW. Various trash debris located around bus stop area.	Trash debris observed around bust stop area.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	Medium	MH	High	Medium	4	3	1	4	3	3
14	MR07	MRSS1-14	Monitoring Station in MR	-80.2604823	25.8073103	10/23/2020	410	300	740	150	1100	1250	4.1	50 U	Sampled from side of fence area. SFWMD on site at time of sampling. Slight vegetation observed in water. Iguanas in area. Excessive trash debris observed stagnant along western curtains and water structures, excessive trash along the banks of MR.	Excessive iguanas in area. Trash debris likely flowing from upstream getting stuck in water structures and pushed on the outerbanks of MR.	All regulated parameters were above the applicable surface water quality standards, with the exception of Orthophosphorous.	High	SW	High	Medium	3	3	2	3	3	1
15	MR08	MRSS1-15	Monitoring Station in MR	-80.264216	25.810136	10/23/2020	300	305	830	150	1200	1350	3.8 U	50 U	Sampled from downstream side of bridge. Slight trash debris observed in water and in surrouding vicinity. Homeless area located on west side of bridge, excessive trash in this area. Palacio Motel Inn to the North, Dmotors holiday to the South. Mobil-gas station NW of sample area.	Trash from surrounding properties.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen that exceeded the numeric nutrient criteria of 290 ug/L for the south segment of North Biscayne Bay, and Ammonia which exceeds the Chapter 24-42 criteria of 500 ug/L..	High	SW	High	Medium	3	3	1	3	3	1

Miami River Storm Sewer System Sampling Results for Cycle 1 (October 2020)
Wood Project# 6783-20-3235

No.	Sampling Point	Station	Layer	Actual Longitude	Actual Latitude	E.Coli MPN/100mL	Enterococci MPN/100mL	Ammonia Nitrogen (ug/L)	Nitrate Nitrite (ug/L)	Total Kjeldahl Nitrogen (TKN) (ug/L)	Orthophosphate (ug/L)	Total Phosphorous (ug/L)	Field Observations	Potential Sources of Contamination	Review & Comments	Recommendations	E.coli Level	Entero Level	TN Level	OrthoP Level
13	S1	MRSS1-13	Hydraulic Structure	-80.256397	25.8085	310	1050	140	330	330 I	48	58 I	Water flowing west towards MR. No visible trash debris in structure. MH directly east of structure contained various trash debris. Excessive amounts of trash debris observed in and around the eastern and western french drains located at the south side of the intersection of NW 36th St and NW 37th Ave. Casino located to the SW, Pinnacle Plaza located to the east, Auto shop located to the NW. Various trash debris located around bus stop area.	Trash debris observed around bust stop area.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen and Orthophosphate that exceeded the respective numeric nutrient criteria of 290 ug/L and 10 ug/L for the south segment of North Biscayne Bay.	Medium	1	4	2	3
14	MR07	MRSS1-14	Monitoring Station in MR	-80.2604823	25.8073103	410	300	740	150	1100	4.1	50 U	Sampled from side of fence area. SFWMD on site at time of sampling. Slight vegetation observed in water. Iguanas in area. Excessive trash debris observed stagnant along western curtains and water structures, excessive trash along the banks of MR.	Excessive iguanas in area. Trash debris likely flowing from upstream getting stuck in water structures and pushed on the outerbanks of MR.	All regulated parameters were above the applicable surface water quality standards, with the exception of Ammonia and Orthophosphorous.	High	2	3	3	1
15	MR08	MRSS1-15	Monitoring Station in MR	-80.264216	25.810136	300	305	830	150	1200	3.8 U	50 U	Sampled from downstream side of bridge. Slight trash debris observed in water and in surrouding vicinity. Homeless area located on west side of bridge, excessive trash in this area. Palacio Motel Inn to the North, Dmotors holiday to the South. Mobil-gas station NW of sample area.	Trash from surrounding properties.	All parameters were below the applicable surface water quality standards with the exception of Total Nitrogen that exceeded the numeric nutrient criteria of 290 ug/L for the south segment of North Biscayne Bay.	High	1	3	3	1

ATTACHMENT B

PHOTO LOG

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
1	WB1	MRSS1-1	Surface Water	25.794171	-80.241827	WB1 is a discharge point from a County major outfall. It is along the northern edge of MR, at the approximate intersection of NW 20 Street and NW 29 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#1	10/22/2020	Area of sample taken. Photo facing southeast.	Sample area appeared in good condition. Cargo ship located to NW of sample site. Iguanas and vessels located in the vicinity.
2	#2		Sampling area.	
3	#3		View of sample area facing northwest.	
4	#4		Facing south from sample area.	
5	#5		Facing south approximately 200-300 ft up northwest from sample area.	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
2	M6	MRSS1-2	Manhole	25.794433	-80.240896	M6 is immediately south of NW North River Drive and it is the first manhole (MH) along the French Drain from the northwest. It is west of NW 27 Avenue. There is a MH M1 located immediately southeast of M6. Ensure that samples are collected only from M6 since it is connected to the outfall to the river.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#38	10/22/2020	View inside structure	Thick foam/soapy appearance on surface of water. Pipes fully submerged. Very slight trash debris in MH. Sample area located near Gasolina Orion-gas station. Observed excessive trash and poor conditions to the south of the gas stations. Small flower market located to the east of the gas station property.
2	#39		View of closed structure, facing North towards Miami Gas property.	
3	#40		View of flower cart located approximately 15 feet directly south of the MH. Located on the east corner of Westar property.	
4	#41		View of Westar gas statio located dwithin approximately 20 feet from MH.	

APPENDIX 1 – Sample Photo and Comment Log Form						
Site No.	**Sampling Point**	**Structure Name**	**Type of Structure**	**Latitude**	**Longitude**	**Sampling Location for Miami River Cycle 1 on October 22-23, 2020**
5	#42			View of various trash debris located to the rear of Westar gas station near adjacent properties to the south.		
6	#43			Additional view of trash filled poly drum and various trash near properties to the south of Westar gas station		
7	#44			View of stagnant water and algae observed along rear property line of Westar gas station		
8	#45			Additional view of stagnant water and algae observed along rear of Westar and various trash debris on adjacent properties to the south.		

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
3	WB2	MRSS1-3	Surface Water	25.795706	-80.244326	WB2 is a discharge point from a County major outfall along the northern edge of MR. It is south of NW North River Drive and it is slightly west of an approximate

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#6	10/22/2020	View of sampling area and various shipment items	Excessive oil sheen on surface of water. Large Cargo ship located directly to the south of the sample location. Smell of petroleum in vicinity NW of sample site. Observed Run Off from an adjoining property located approximately 0.3 miles upstream of sample site. Observed along north side of MR.
2	#7		View of cargo approximately 5 feet from sampling area.	
3	#8		View of oil sheen on water surface within 5 feet of sampling area.	
4	#9		View of properties to the South	
5	#10		View of properties to the South	
6	#11		Facing South	

APPENDIX 1 – Sample Photo and Comment Log Form						
Site No.	**Sampling Point**	**Structure Name**	**Type of Structure**	**Latitude**	**Longitude**	**Sampling Location for Miami River Cycle 1 on October 22-23, 2020**
7	#12			View of various debris located along northern properties of MR.		
8	#13			View unsolicited run off from a northern property located approximately 0.3 miles upstream from sample site.		Water appeared from a large hose coming off of property line into the MR. Approximate location of run of: Latitude 25.798407 Longitude: -80.248094
9	#14			Additional view of run off fro property located along northern side of MR.		

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
4	M5	MRSS1-4	Manhole	25.7961955	-80.2439267	M5 is in the immediate south of NW North River Drive, and slightly east of NW 30 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#46	10/22/2020	View of sampling area.	Pipes fully submerged at time of sampling. Excessive trash debris in MH. Five Star Complete Auto Paint located directly to the South. Metal shop and Auto center loctaed to the North. General trash debris in area.
2	#47		View of excessive trash debris inside of structure	
3	#48		Facing North	
4	#49		Facing northwest	
5	#50		Additional view of northwest	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
5	WB3	MRSS1-5	Surface Water	25.801263	-80.251792	WB3 is a discharge point from a County major outfall on the northen edge of MR and south of NW North River Drive. It is west of NW 33 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#15	10/22/2020	View of sampling area.	Fully submerged outfall, submerged by approximately 2' of water. Cloudy white discharge coming out of outfall at time of sampling. Vessels in vicinity of sample area. Observed run off from the rear of a property located on the south side of MR approximately 370 feet from sample site. Property appeared to be Kings Brothers Metal Recycling, junkyard property.
2	#16		View of property to the South	
3	#17		Additional view to the south.	
4	#18		View unsolicited run off from a southern property located approximately 370 feet upstream from sample site.	Water appeared to be coming from a large hose off of property line into the MR. Approximate location of run of: Latitude 25.801586 Longitude: -80.252851
5	#19		Additional view of run off	
6	#20		Additional view of run off	Water observed excessively cloudy due to run off.

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
6	C15	MRSS1-6	Catch Basin	25.800454	-80.249226	C15 is a Catch Basin (CB) located on the intersection of NW North River Drive and NW 27 Street on the northern side.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#51	10/22/2020	View of structure, facing east.	Fully submerged pipes. Foamy substance on top of water. Slight trash debris inside structure. Scrap metal facility to the North, boat yard to the south. Unkempt surrounding area.
2	#52		View of northern and southern properties.	
3	#53		Additional view of structure	View of slight trash debris surrounding structure
4	#54		View of substance on water surface of structure	Slight foamy appearance on surface water inside structure
5	#55		Facing South	View of pile of various trash debris located on southern side of NW N River Drive in vicinity of sampling area.
6	#56		Facing West	Additional trash pile of various trash debris located on southern side of NW N River Drive in vicinity of sampling area.

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
7	C4	MRSS1-7	Catch Basin	25.804419	-80.254536	C4 is the only CB in the north of NW North River Drive and west of NW 36 Avenue. C4 is immediately north of NW North River Drive.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#57	10/22/2020	View of open structure	Excessive trash debris. Pipes full submerged. Dandy Sand located to the north, junkyard located to the south, tire center located to the east, and cargo container yard located to the northwest.
2	#58		Additonal view of open structure	View of structure facing east
3	#59		Existing conditions inside the structure	Excessive trash debris inside structure.

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
8	C12	MRSS1-8	Manhole	25.804727	-80.255098	C12 is a county manhole located directly southwest of C13.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#89	10/23/2020	Facing West	Slight trash debris. Pipes fully submerged. Dandy Sand located to the SE, Maritime Agency located to the West, Antillean located to the East. No obvious sources of pollution at time of sampling. General area unkempt.
2	#90		Facing Northwest	
3	#91		Fcaing Northeast	
4	#92		View inside structure	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
9	WB4	MRSS1-9	Surface Water	25.804199	-80.256463	WB4 is a discharge point from a County outfall discharge point located along the south edge of MR and north of NW South River Drive. It is east of NW 28 Steet.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#21	10/22/2020	Distant view of sampling area and adjoining properties	Partially submerged outfall. Outfall submerged approximately halfway of the 3' discharge point. Algae was observed inside of the pipe. Surface of water appeared with small floating particles. Vessels in direct vicinity of sample area. Additional pipe observed approximately 10 feet upstream of sampling point.
2	#22		Additional distant view of sampling area and adjoining properties	
3	#23		View of property to the east of sample area property.	
4	#24		View of sample area and adjacent property	
5	#25		View of partially submerged discharge point	
6	#26		Additional view of partially submerged discharge point	

APPENDIX 1 – Sample Photo and Comment Log Form						
Site No.	**Sampling Point**	**Structure Name**	**Type of Structure**	**Latitude**	**Longitude**	**Sampling Location for Miami River Cycle 1 on October 22-23, 2020**
7	#27			View of structure with sample ID		
8	#28			View of structure and algae within structure		
9	#29			View of second structure observed approximately 10 feet upstream of sample structure. Structure observed slightly bent inward.		
10	#30			Additional view of secondary structure.		

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
10	M2	MRSS1-10	Manhole	25.803763	-80.2566085	M2 is located immediately north of NW South River Drive and south of MR. It is on the approximate extension of NW 37 Avenue from the north. There is a MH M3, northwest of this MH. M3 is the beginning of a County outfall.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#62	10/23/2020	View of adjoining property near sample site (Betty K Liner)	Pipe direction appeared going to the south and west direction. Water flowing south. Slight organic odor. Bricks and concrete debris observed. Water clear, bottom of structure visible. Observed a water hose discharging from BettyK Liner property, visible floody in surrounding area.
2	#63		View of unsolicited run off from Betty K Liner property	View of water discharging from property onto street
3	#64		View of open structure	
4	#65		Additional view of open structure	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
11	WB5	MRSS1-11	Surface Water	25.805133	-80.257002	WB5 is a discharge point from a County major outfall along the northern edge of MR, and it is south of NW North River Drive. It will be slightly to the west if you extend NW 37 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#31	10/22/2020	Distant view of sample area and adjoining properties located to the north.	Could not locate visible discharge point. Sampled from area closest to proposed coordinates. Observed excessive trash along the northern bank of MR. Pool of trash located downstream of MR, approximately 400' southeast of sampling point. Trash observed stagnant between large vessel and docking wall. Observed small white particles descending from Ferrous Processing & Trading Co Miami. White particles covered water surface. Strong odor coming from processing plant.
2	#32		View of sample area and trash debris located in vicinity	
3	#33		View of trash debris located upstream in vicinity of sample area.	
4	#34		View of debris on surface near adjacent property	Styrofoam debris observed on surface of water near sampling area. Styrofoam observed along northern portion of property (Ferrous Proccessing Plant) and throughout nearby surface water of MR.
5	#35		Additional view of styrofoam on Ferrous Processing property	View of styrofoam observed along Ferrous Processing property

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
6	#36			View of excessive trash debris observed on surface water approximately 400 feet downstream on the northern side of MR		Excessive pool of trash
7	#37			Additional view of pool of trash on surface water		Excessive pool of trash

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
12	M10	MRSS1-12	Manhole	25.805839	-80.256392	M10 is in the northeast corner of NW 37 Avenue and NW 33 Street. A pipe for a major outfall begins at this MH. There is a manhole just east of M10. Ensure that the samples are collected from M10 since it is connected to the outfall.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#67	10/23/2020	View of open structire facing south	Pipes fully submerged. No debris observed in or around the surrounding area of MH.
2	#68		View of structure faing North	
3	#69		View of structure facing west	
4	#70		Facing East	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
13	S1	MRSS1-13	Hydraulic Structure	25.8085	-80.256397	S1 is in the southeast corner of NW 36 Street and NW 37 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#71	10/23/2020	View of intersection of sampling area. View facing north.	Water flowing west towards MR. No visible trash debris in structure. MH directly east of structure contained various trash debris. Excessive amounts of trash debris observed in and around the eastern and western french drains located at the south side of the intersection of NW 36th St and NW 37th Ave. Casino located to the SW, Pinnacle Plaza located to the east, Auto shop located to the NW. Various trash debris located around bus stop area.
2	#72		View of S1 and neighboring structure.	
3	#73		View of open structure	
4	#74		Facing North	
5	#75		View of Pinnacel Plaza located to the southeast of the structure	
6	#76		View of trash filled french drain located directly south, on the east and west side of NW 37th Ave.	View of trash filled french drain.

APPENDIX 1 – Sample Photo and Comment Log Form						
Site No.	**Sampling Point**	**Structure Name**	**Type of Structure**	**Latitude**	**Longitude**	**Sampling Location for Miami River Cycle 1 on October 22-23, 2020**
7	#77			Additional view fo trash filled french drain		
8	#78			Additional view fo trash filled french drain		

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
14	MR07	MRSS1-14	Monitoring Station in MR	25.8073103	-80.2604823	MR07 is along MR and south of NW North River Drive. It is between NW 36 Street andNW 34 Street. It is approximately west of NW 38 Avenue.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#79	10/23/2020	Distant view of sampling area and surrounding water structure. Facing East	Sampled from side of fence area. SFWMD on site at time of sampling. Slight vegetation observed in water. Iguanas in area. Excessive trash debris observed stagnant along western curtains and water structures, excessive trash along the banks of MR.
2	#80		View of MR facing west	
3	#81		View of trash debris located along river banks approximately 350ft west of sampling area	
4	#82		View of trash debris located around water buoy's.	Excessive trash debris located around water buoys, approximately 300 feet from sample area
5	#83		View of excessive trash debris along water structure near sampling area	
6	#84		View of sample area, facing east	

APPENDIX 1 – Sample Photo and Comment Log Form

Site No.	Sampling Point	Structure Name	Type of Structure	Latitude	Longitude	Sampling Location for Miami River Cycle 1 on October 22-23, 2020
15	MR08	MRSS1-15	Monitoring Station in MR	25.810136	-80.264216	MR08 is on the east of the intersection of NW 42 Avenue and Miami River. Collect samples from the NW 42 Avenue Bridge on the downstream side of the MR. Document the correct Latitude and Longitude of the collection site.

No.	Picture No. from Camera	Picture Date	Description of Photo	Comments (Observations made at the Site)
1	#85	10/23/2020	View of sample area facing north	Sampled from downstream side of bridge. Slight trash debris observed in water and in surrouding vicinity. Homeless area located on west side of bridge, excessive trash in this area. Palacio Motel Inn to the North, Dmotors holiday to the South. Mobil-gas station NW of sample area.
2	#86		View of MR from sampling area facing northeast	
3	#87		View of MR facing east from sample area (off of bridge)	
4	#88		Neighboring area. Homeless area within bridge area. Facing west from S Le Jeune Rd	

Miami River Sampling Points Cycle 1
Water Quality Sampling
October 22-23, 2020

Photograph 1:
Sampling point: WB1
Station: MRSS1-1
Surface Water
10/22/20

Photograph 2:
Sampling point: WB1
Station: MRSS1-1
Surface Water
10/22/20

Photograph 3:
Sampling point: WB1
Station: MRSS1-1
Surface Water
10/22/20

Photograph 4:
Sampling point: WB1
Station: MRSS1-1
Surface Water
10/22/20

Photograph 5:
Sampling point: WB1
Station: MRSS1-1
Surface Water
10/22/20

Photograph 6:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 7:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 8:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 9:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

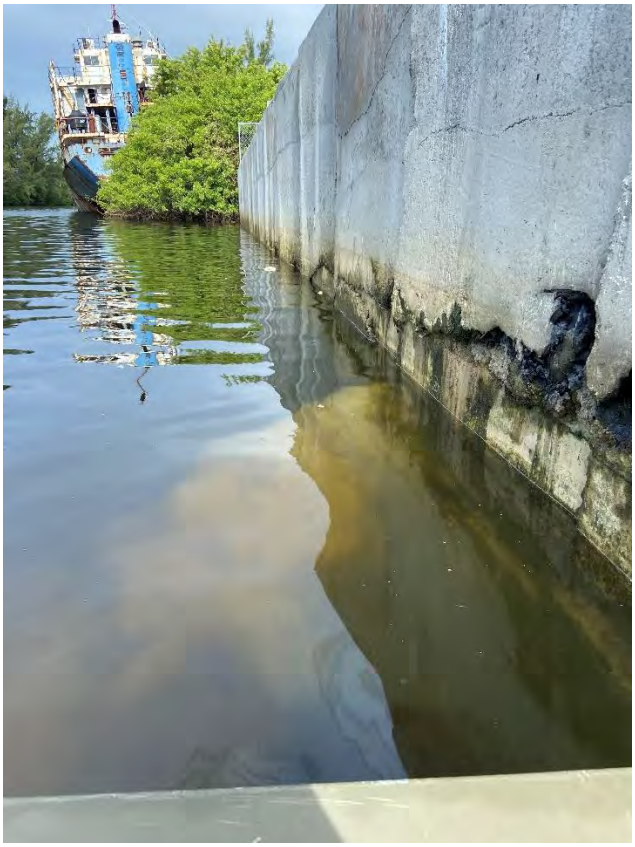
Photograph 10:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 11:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 12:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 13:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20

Photograph 14:
Sampling point: WB2
Station: MRSS1-3
Surface Water
10/22/20



Photograph 15:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 16:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 17:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 18:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 19:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 20:
Sampling point: WB3
Station: MRSS1-5
Surface Water
10/22/20

Photograph 21:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

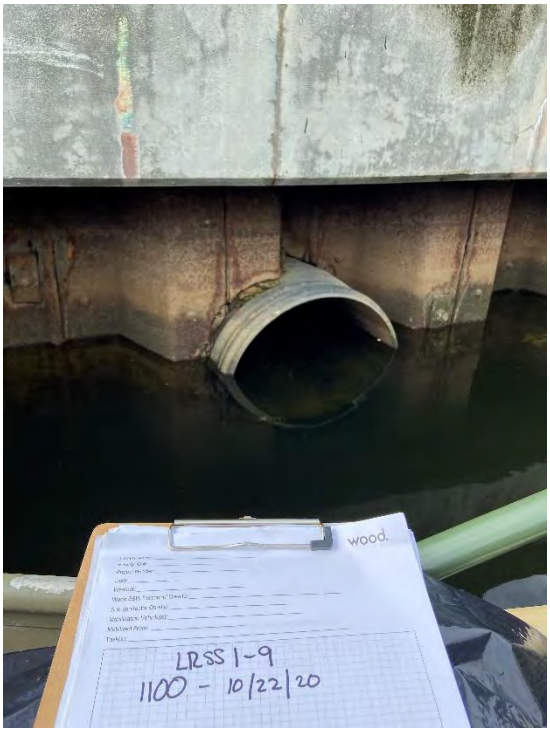
Photograph 22:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 23:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 24:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 25:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 26:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20



Photograph 27:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 28:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 29:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 30:
Sampling point: WB4
Station: MRSS1-9
Surface Water
10/22/20

Photograph 31:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 32:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 33:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 34:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 35:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 36:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 37:
Sampling point: WB5
Station: MRSS1-11
Surface Water
10/22/20

Photograph 38:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 39:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 40:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 41:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 42:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 43:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 44:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 45:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 46:
Sampling point: M5
Station: MRSS1-4
Surface Water
10/22/20

Photograph 47:
Sampling point: M5
Station: MRSS1-4
Surface Water
10/22/20

Photograph 48:
Sampling point: M5
Station: MRSS1-4
Surface Water
10/22/20

Photograph 49:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 50:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 51:
Sampling point: C15
Station: MRSS1-6
Surface Water
10/22/20

Photograph 52:
Sampling point: C15
Station: MRSS1-6
Surface Water
10/22/20

Photograph 53:
Sampling point: C15
Station: MRSS1-6
Surface Water
10/22/20

Photograph 54:
Sampling point: C15
Station: MRSS1-6
Surface Water
10/22/20

Photograph 55:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 56:
Sampling point: M6
Station: MRSS1-2
Surface Water
10/22/20

Photograph 57:
Sampling point: C4
Station: MRSS1-7
Surface Water
10/22/20

Photograph 58:
Sampling point: C4
Station: MRSS1-7
Surface Water
10/22/20

Photograph 59:
Sampling point: C4
Station: MRSS1-7
Surface Water
10/22/20

Photograph 60:
Sampling point: C4
Station: MRSS1-7
Surface Water
10/22/20

Photograph 61:
Sampling point: C4
Station: MRSS1-7
Surface Water
10/22/20

Photograph 62:
Sampling point: M2
Station: MRSS1-10
Surface Water
10/22/20

Photograph 63:
Sampling point: M2
Station: MRSS1-10
Surface Water
10/22/20

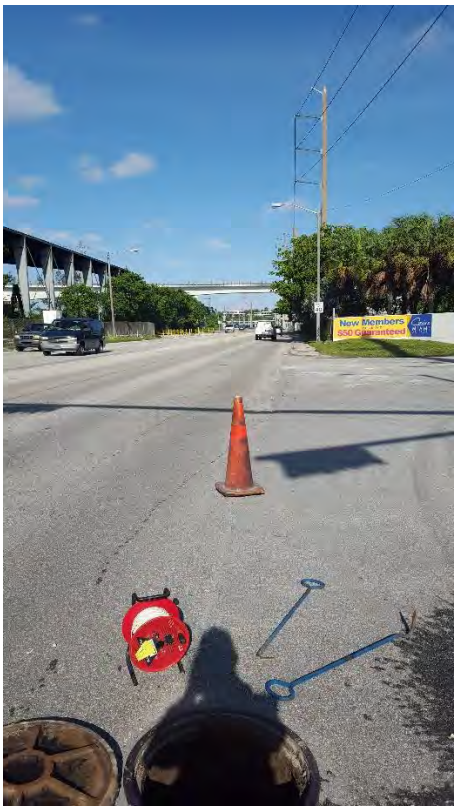
Photograph 64:
Sampling point: M2
Station: MRSS1-10
Surface Water
10/22/20

Photograph 65:
Sampling point: M2
Station: MRSS1-10
Surface Water
10/22/20

Photograph 66:
Sampling point: M2
Station: MRSS1-10
Surface Water
10/22/20

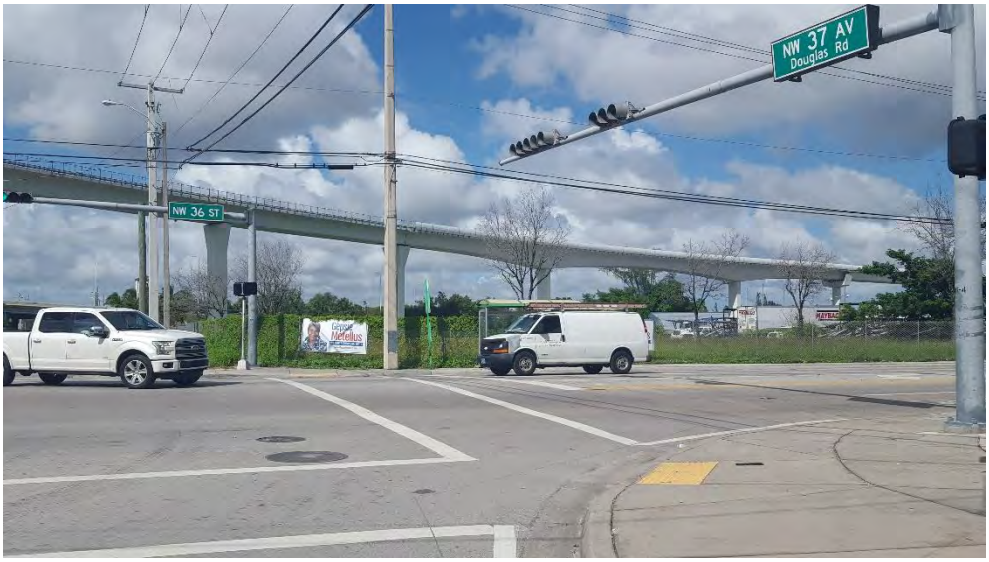
Photograph 67:
Sampling point: M10
Station: MRSS1-12
Surface Water
10/23/20

Photograph 68:
Sampling point: M10
Station: MRSS1-12
Surface Water
10/23/20



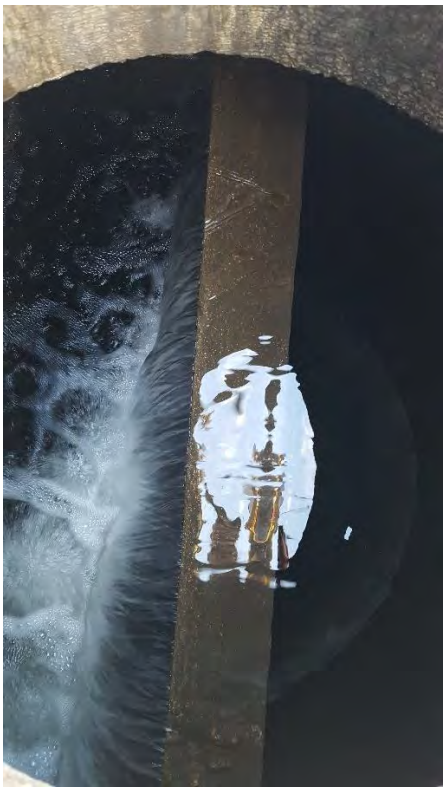
Photograph 69:
Sampling point: M10
Station: MRSS1-12
Surface Water
10/23/20

Photograph 70:
Sampling point: M10
Station: MRSS1-12
Surface Water
10/23/20

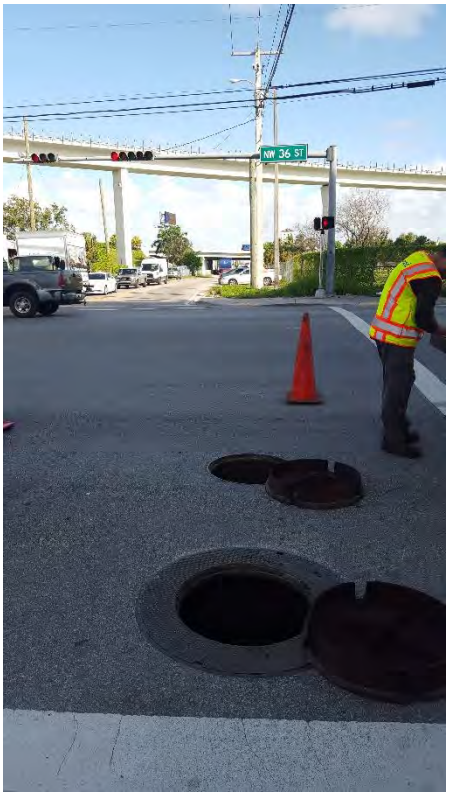


Photograph 71:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

Photograph 72:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20



Photograph 73:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20



Photograph 74:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

Photograph 75:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

Photograph 76:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

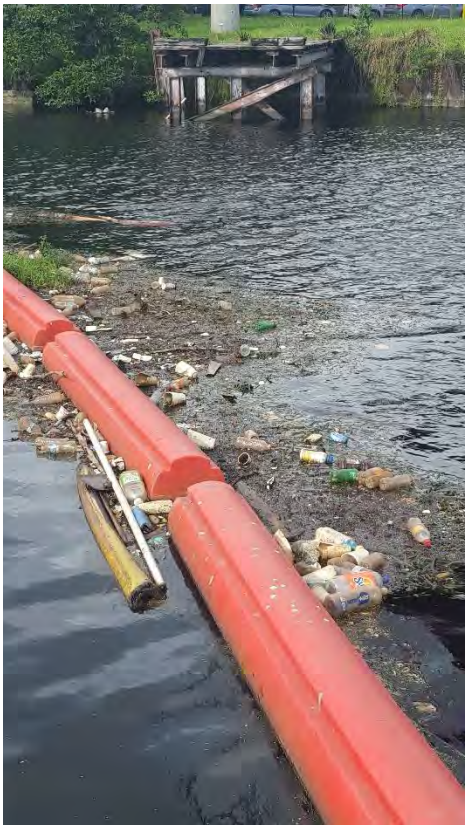
Photograph 77:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

Photograph 78:
Sampling point: S1
Station: MRSS1-13
Surface Water
10/23/20

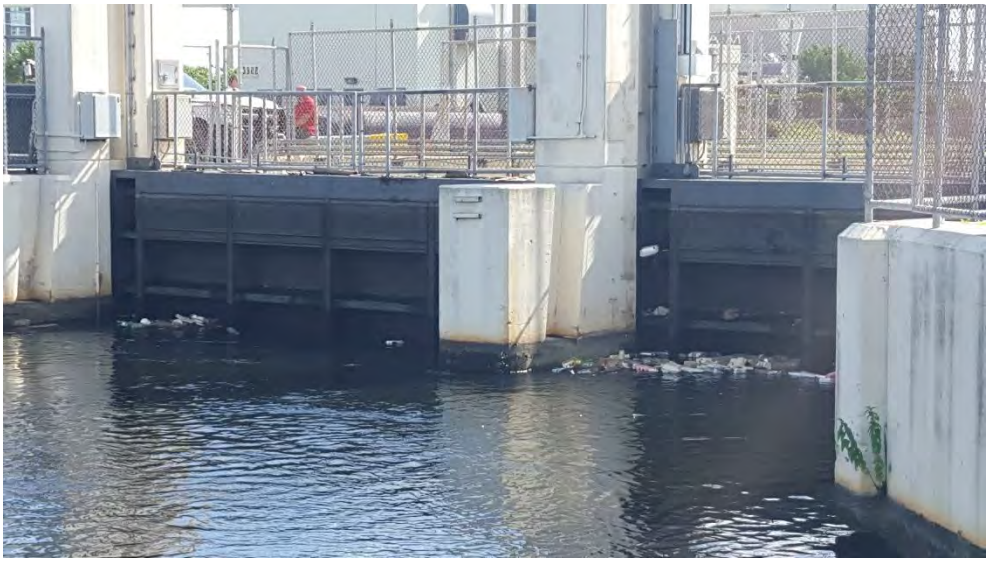
Photograph 79:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20

Photograph 80:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20

Photograph 81:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20

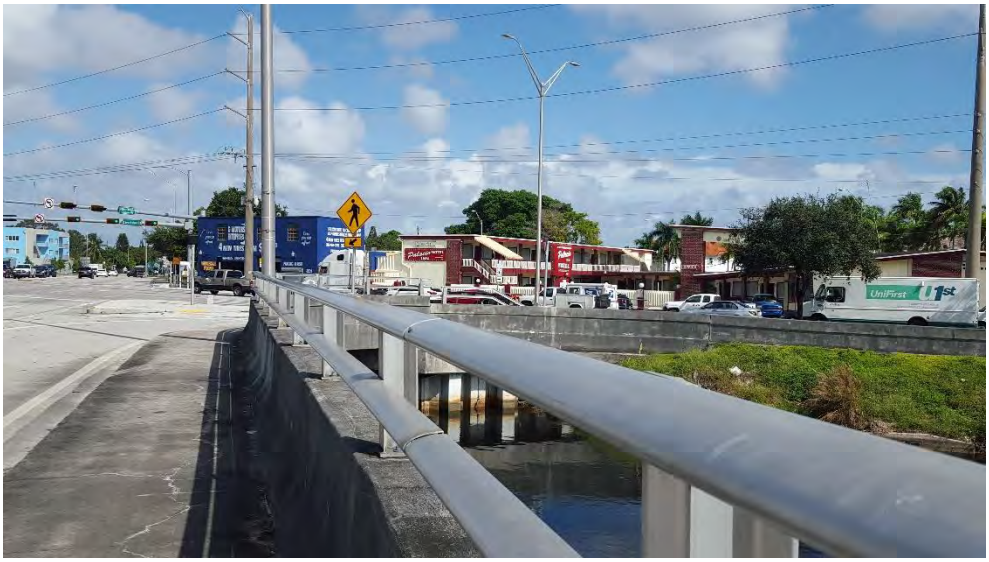


Photograph 82:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20



Photograph 83:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20

Photograph 84:
Sampling point: MR07
Station: MRSS1-14
Surface Water
10/23/20



Photograph 85:
Sampling point: MR08
Station: MRSS1-15
Surface Water
10/23/20

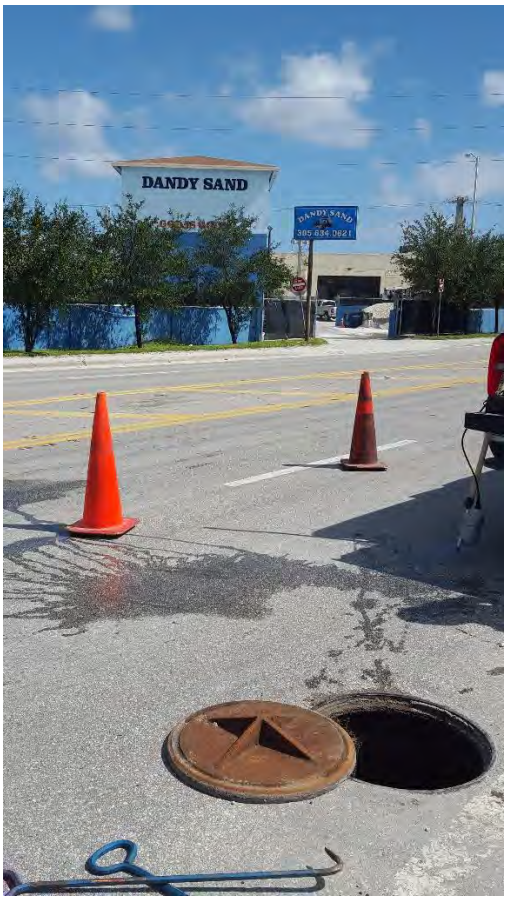
Photograph 86:
Sampling point: MR08
Station: MRSS1-15
Surface Water
10/23/20

Photograph 87:
Sampling point: MR08
Station: MRSS1-15
Surface Water
10/23/20

Photograph 88:
Sampling point: MR08
Station: MRSS1-15
Surface Water
10/23/20

Photograph 89:
Sampling point**:** C12
Station: MRSS1-8
Surface Water
10/23/20

Photograph 90:
Sampling point**:** C12
Station: MRSS1-8
Surface Water
10/23/20



Photograph 91:
Sampling point**:** C12
Station: MRSS1-8
Surface Water
10/23/20

Photograph 92:
Sampling point**:** C12
Station: MRSS1-8
Surface Water
10/23/20

ATTACHMENT C

CALIBRATION LOGS

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 5560 **INSTRUMENT #** 1

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP

☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A pH: 10.0 EXP: 6/22 LOT#: 0G1F000

Standard B pH: 7.0 EXP: 07/22 LOT#: 0G1G815

Standard C pH: 4.0 EXP: 4/22 LOT#: 0G10040

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
20/10/22	8:06	A	10.0	10.0	-	yes	INIT	KM
20/10/22	8:08	B	7.0	7.0	-	yes	INIT	KM
20/10/22	8:10	C	4.0	4.0	-	yes	INIT	KM
20/10/22	1535	A	10.0	10.0	-	yes	INIT	KM
20/10/22	1537	B	7.0	7.0	-	yes	INIT	KM
20/10/22	1538	C	4.0	4.0	-	yes	INIT	KM
20/10/23	821	A	10.0	10.0	-	yes	INIT	KM
20/10/23	823	B	7.0	7.0	-	yes	INIT	KM
20/10/23	824	C	4.0	4.0	-	yes	INIT	KM
20/10/23	1324	A	10.0	10.0	-	yes	INIT	KM
20/10/23	1325	B	7.0	7.0	-	yes	INIT	KM
20/10/23	1327	C	4.0	4.0	-	yes	INIT	KM

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 1

PARAMETER: *[check only one]*

☐ TEMPERATURE ☒ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP

☐ TURBIDITY ☐ RESIDUAL Cl ☒ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 1.413 µs/cm Exp: 05/21 Lot#: 0GE438

Standard B 100 %. Ambient Air

Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
20/10/22	8:14	A	1.413	1.413	—	yes	INIT	KM
20/10/22	816	B	100 %.	100 %.	—	yes	INIT	KM
20/10/22	1540	A	1.413	1.413	—	yes	INIT	KM
20/10/22	1641	B	100 %.	100 %.	—	yes	INIT	KM
20/10/23	826	A	1.413	1.413	—	yes	INIT	KM
20/10/23	828	B	100 %.	100 %.	—	yes	INIT	KM
20/10/23	1329	A	1.413	1.413	—	yes	INIT	KM
20/10/23	1331	B	100 %.	100 %.	—	yes	INIT	KM

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) Lamotte **INSTRUMENT #** 2

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☑ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0 NTU Exp: 12/21 Lot#: 20180104B
Standard B 1.0 NTU Exp: 02/22 Lot#: 20320046
Standard C 10.0 NTU Exp: 05/22 Lot#: 20320111

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
20/10/22	800	A	0.0	0.0	—	yes	INIT	KM
20/10/22	804	B	1.0	1.0	—	yes	INIT	KM
20/10/22	805	C	10.0	10.0	—	yes	INIT	KM
20/10/22	1630	A	0.0	0.0	—	yes	INIT	KM
20/10/22	1632	B	1.0	1.0	—	yes	INIT	KM
20/10/22	1634	C	10.0	10.0	—	yes	INIT	KM
20/10/23	815	A	0.0	0.0	—	yes	INIT	KM
20/10/23	817	B	1.0	1.0	—	yes	INIT	KM
20/10/23	819	C	10.0	10.0	—	yes	INIT	KM
20/10/23	1320	A	0.0	0.0	—	yes	INIT	KM
20/10/23	1321	B	1.0	1.0	-	yes	INIT	KM
20/10/23	1322	C	10.0	10.0	-	yes	INIT	KM

ATTACHMENT D

BACTERIA LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY FORMS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 28, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: MDC Storm Sewer
Pace Project No.: 35586988

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - South Florida

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project:	MDC Storm Sewer
Pace Project No.:	35586988

Pace Analytical Services South Florida
3610 Park Central Blvd N, Pompano Beach, FL 33064 Florida Certification #: E86240

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: MDC Storm Sewer
Pace Project No.: 35586988

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35586988001	**MRSS1-2**	Water	10/22/20 13:45	10/22/20 17:30
35586988002	**MRSS1-4**	Water	10/22/20 14:30	10/22/20 17:30
35586988003	**MRSS1-6**	Water	10/22/20 14:50	10/22/20 17:30
35586988004	**MRSS1-7**	Water	10/22/20 15:25	10/22/20 17:30

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE ANALYTE COUNT

Project: MDC Storm Sewer
Pace Project No.: 35586988

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35586988001	**MRSS1-2**	9223B/Quanti-Tray	OT1	2	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586988002	**MRSS1-4**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586988003	**MRSS1-6**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586988004	**MRSS1-7**	9223B/Quanti-Tray	OT1	2	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF

PASI-SF = Pace Analytical Services - South Florida

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

SUMMARY OF DETECTION

Project: MDC Storm Sewer
Pace Project No.: 35586988

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35586988001	**MRSS1-2**					
9223B/Quanti-Tray	Total Coliforms	>48392	MPN/100mL	20.0	10/23/20 13:53	EI
9223B/Quanti-Tray	E.coli	4490	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	17300	MPN/100mL	10.0	10/23/20 18:55	
35586988002	**MRSS1-4**					
9223B/Quanti-Tray	E.coli	370	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	1260	MPN/100mL	10.0	10/23/20 18:55	
35586988003	**MRSS1-6**					
9223B/Quanti-Tray	E.coli	240	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	14100	MPN/100mL	10.0	10/23/20 18:55	
35586988004	**MRSS1-7**					
9223B/Quanti-Tray	Total Coliforms	>48392	MPN/100mL	20.0	10/23/20 13:53	EI
9223B/Quanti-Tray	E.coli	2030	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	5010	MPN/100mL	10.0	10/23/20 18:55	

Pace Analytical Services, LLC
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(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586988

Sample: MRSS1-2 **Lab ID: 35586988001** Collected: 10/22/20 13:45 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
Total Coliforms	**>48392**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		EI
E.coli	**4490**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**17300**	MPN/100mL	10.0	10.0	10	10/22/20 18:25	10/23/20 18:55		

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586988

Sample: MRSS1-4 **Lab ID: 35586988002** Collected: 10/22/20 14:30 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**370**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**1260**	MPN/100mL	10.0	10.0	10	10/22/20 18:25	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586988

Sample: MRSS1-6 **Lab ID: 35586988003** Collected: 10/22/20 14:50 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**240**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**14100**	MPN/100mL	10.0	10.0	10	10/22/20 18:25	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586988

Sample: MRSS1-7 **Lab ID: 35586988004** Collected: 10/22/20 15:25 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
Total Coliforms	**>48392**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		EI
E.coli	**2030**	MPN/100mL	20.0	20.0	20	10/22/20 18:25	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**5010**	MPN/100mL	10.0	10.0	10	10/22/20 18:25	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586988

QC Batch: 677337 | Analysis Method: 9223B/Quanti-Tray
QC Batch Method: 9223B/Quanti-Tray | Analysis Description: Colilert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35586988001, 35586988002, 35586988003, 35586988004

METHOD BLANK: 3684435 Matrix: Water
Associated Lab Samples: 35586988001, 35586988002, 35586988003, 35586988004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	1.0 U	1.0	1.0	10/23/20 13:53	
Total Coliforms	MPN/100mL	1.0 U	1.0	1.0	10/23/20 13:53	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586988

QC Batch: 677332 | Analysis Method: Enterolert/Quanti-Tray
QC Batch Method: Enterolert/Quanti-Tray | Analysis Description: Enterolert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35586988001, 35586988002, 35586988003, 35586988004

METHOD BLANK: 3684431 Matrix: Water
Associated Lab Samples: 35586988001, 35586988002, 35586988003, 35586988004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Enterococci	MPN/100mL	1.0 U	1.0	1.0	10/23/20 18:55	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: MDC Storm Sewer
Pace Project No.: 35586988

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

U	Compound was analyzed for but not detected.
EI	Reported value should be considered a minimum estimate since it is the maximum reportable number for this method based on the sample volume used. The true value is likely greater than the value reported.

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MDC Storm Sewer
Pace Project No.: 35586988

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35586988001	**MRSS1-2**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586988002	**MRSS1-4**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586988003	**MRSS1-6**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586988004	**MRSS1-7**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586988001	**MRSS1-2**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586988002	**MRSS1-4**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586988003	**MRSS1-6**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586988004	**MRSS1-7**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336

WO# : 35586988

35586988

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Wood E&I	Report To:	Ash Aitharaju	Attention:	
Address:	5845 NW 158th Street	Copy To:		Company Name:	
Miami Lakes, FL 33014				Address:	
Email:	ashok.aitharaju@woodplc.com	Purchase Order #:		Pace Quote:	
Phone:	(954)695-6796 Fax:	Project Name:	MDC Storm Sewer	Pace Project Manager:	christina.raschke@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	5651

Regulatory Agency	
State / Location	FL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	E. Coli MPN	Enterococci	Residual Chlorine (Y/N)
1	MRSS1-2			10/22	1345				2						X				X	X	
2	MRSS1-4				1430				2						X				X	X	
3	MRSS1-6				1450				2						X				X	X	
4	MRSS1-7			↓	1525				2						X				X	X	
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kelly McCoil / Wood	10/22/20	1730	UPS / Pace	10/22	1730	6.7

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McCoil

SIGNATURE of SAMPLER: Kelly McCoil DATE Signed: 10/22/20

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Sample Condition Upon Receipt Form (SCUR)

Project # WO# : 35586988

Project Manager: PM: CTR **Due Date:** 10/29/20

Client: CLIENT: 36-MACTEC

Date and Initials of person:
Examining contents: LM
Label: LM
Deliver:
pH:

Thermometer Used: T343 Date: 10/22/20 Time: 1730 Initials: LP

State of Origin: NC ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	6.7 (Visual)	0.0 (Correction Factor)	6.7 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: 10/22/20 Shorted Time: 1735 Qty: 8

		Comments:
Chain of Custody Present	☑Yes ☐ No ☐N/A	
Chain of Custody Filled Out	☑Yes ☐ No ☐N/A	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No ☐N/A	
Samples Arrived within Hold Time	☑Yes ☐ No ☐N/A	
Rush TAT requested on COC	☐Yes ☑ No ☐N/A	
Sufficient Volume	☑Yes ☐ No ☐N/A	
Correct Containers Used	☑Yes ☐ No ☐N/A	
Containers Intact	☑Yes ☐ No ☐N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑Yes ☐ No ☐N/A	
All containers needing acid/base preservation have been checked.	☐Yes ☐ No ☑N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐Yes ☐ No ☑N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐Yes ☐ No ☑N/A	
Trip Blank Present:	☐Yes ☐ No ☑N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 28, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: MDC Storm Sewer
Pace Project No.: 35586989

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - South Florida

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project:	MDC Storm Sewer
Pace Project No.:	35586989

Pace Analytical Services South Florida
3610 Park Central Blvd N, Pompano Beach, FL 33064 Florida Certification #: E86240

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: MDC Storm Sewer
Pace Project No.: 35586989

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35586989001	**MRSS1-1**	Water	10/22/20 09:20	10/22/20 16:30
35586989002	**MRSS1-3**	Water	10/22/20 09:50	10/22/20 16:30
35586989003	**MRSS1-5**	Water	10/22/20 10:30	10/22/20 16:30
35586989004	**MRSS1-9**	Water	10/22/20 11:00	10/22/20 16:30
35586989005	**MRSS1-11**	Water	10/22/20 11:30	10/22/20 16:30

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(954)582-4300

SAMPLE ANALYTE COUNT

Project: MDC Storm Sewer
Pace Project No.: 35586989

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35586989001	**MRSS1-1**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586989002	**MRSS1-3**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586989003	**MRSS1-5**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586989004	**MRSS1-9**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF
35586989005	**MRSS1-11**	9223B/Quanti-Tray	OT1	1	PASI-SF
		Enterolert/Quanti-Tray	OT1	1	PASI-SF

PASI-SF = Pace Analytical Services - South Florida

Pace Analytical Services, LLC
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(954)582-4300

SUMMARY OF DETECTION

Project: MDC Storm Sewer
Pace Project No.: 35586989

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35586989001	**MRSS1-1**					
9223B/Quanti-Tray	E.coli	331	MPN/100mL	10.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	181	MPN/100mL	10.0	10/23/20 18:55	
35586989002	**MRSS1-3**					
9223B/Quanti-Tray	E.coli	524	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	350	MPN/100mL	10.0	10/23/20 18:55	
35586989003	**MRSS1-5**					
9223B/Quanti-Tray	E.coli	852	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	512	MPN/100mL	10.0	10/23/20 18:55	
35586989004	**MRSS1-9**					
9223B/Quanti-Tray	E.coli	168	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	332	MPN/100mL	10.0	10/23/20 18:55	
35586989005	**MRSS1-11**					
9223B/Quanti-Tray	E.coli	794	MPN/100mL	20.0	10/23/20 13:53	
Enterolert/Quanti-Tray	Enterococci	1300	MPN/100mL	10.0	10/23/20 18:55	

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586989

Sample: MRSS1-1 **Lab ID: 35586989001** Collected: 10/22/20 09:20 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**331**	MPN/100mL	10.0	10.0	10	10/22/20 17:14	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**181**	MPN/100mL	10.0	10.0	10	10/22/20 17:15	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586989

Sample: MRSS1-3 **Lab ID: 35586989002** Collected: 10/22/20 09:50 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**524**	MPN/100mL	20.0	20.0	20	10/22/20 17:40	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**350**	MPN/100mL	10.0	10.0	10	10/22/20 17:40	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
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(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586989

Sample: MRSS1-5 **Lab ID: 35586989003** Collected: 10/22/20 10:30 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**852**	MPN/100mL	20.0	20.0	20	10/22/20 17:40	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**512**	MPN/100mL	10.0	10.0	10	10/22/20 17:40	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
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(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586989

Sample: MRSS1-9 **Lab ID: 35586989004** Collected: 10/22/20 11:00 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**168**	MPN/100mL	20.0	20.0	20	10/22/20 17:40	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**332**	MPN/100mL	10.0	10.0	10	10/22/20 17:40	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586989

Sample: MRSS1-11 **Lab ID: 35586989005** Collected: 10/22/20 11:30 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**794**	MPN/100mL	20.0	20.0	20	10/22/20 17:40	10/23/20 13:53		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**1300**	MPN/100mL	10.0	10.0	10	10/22/20 17:40	10/23/20 18:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586989

QC Batch: 677337 | Analysis Method: 9223B/Quanti-Tray
QC Batch Method: 9223B/Quanti-Tray | Analysis Description: Colilert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35586989001, 35586989002, 35586989003, 35586989004, 35586989005

METHOD BLANK: 3684435 Matrix: Water
Associated Lab Samples: 35586989001, 35586989002, 35586989003, 35586989004, 35586989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	1.0 U	1.0	1.0	10/23/20 13:53	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586989

QC Batch: 677332 | Analysis Method: Enterolert/Quanti-Tray
QC Batch Method: Enterolert/Quanti-Tray | Analysis Description: Enterolert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35586989001, 35586989002, 35586989003, 35586989004, 35586989005

METHOD BLANK: 3684431 Matrix: Water
Associated Lab Samples: 35586989001, 35586989002, 35586989003, 35586989004, 35586989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Enterococci	MPN/100mL	1.0 U	1.0	1.0	10/23/20 18:55	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(954)582-4300

QUALIFIERS

Project: MDC Storm Sewer
Pace Project No.: 35586989

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

U	Compound was analyzed for but not detected.

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MDC Storm Sewer
Pace Project No.: 35586989

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35586989001	**MRSS1-1**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586989002	**MRSS1-3**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586989003	**MRSS1-5**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586989004	**MRSS1-9**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586989005	**MRSS1-11**	9223B/Quanti-Tray	677337	9223B/Quanti-Tray	677339
35586989001	**MRSS1-1**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586989002	**MRSS1-3**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586989003	**MRSS1-5**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586989004	**MRSS1-9**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336
35586989005	**MRSS1-11**	Enterolert/Quanti-Tray	677332	Enterolert/Quanti-Tray	677336

WO# : 35586989

35586989

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Wood E&I
Address:	5845 NW 158th Street
	Miami Lakes, FL 33014
Email:	ashok.aitharaju@woodplc.com
Phone:	(954)695-6796 Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ash Aitharaju
Copy To:	
Purchase Order #:	
Project Name:	MDC Storm Sewer
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	christina.raschke@pacelabs.com,
Pace Profile #:	5651

Regulatory Agency

State / Location: FL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): E. Coli MPN	Enterococci	Residual Chlorine (Y/N)
1	~~LRSS1-1~~ MRSS1-1			10/22/20	920				2						X				X	X	
2	~~LRSS1-3~~ MRSS1-3				950				2						X				X	X	
3	~~LRSS1-5~~ MRSS1-5				1030				2						X				X	X	
4	~~LRSS1-9~~ MRSS1-9				1100				2						X				X	X	
5	~~LRSS1-11~~ MRSS1-11				1130				2						X				X	X	
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Kelly McCoil / Wood	10/22/20	1323		10/22/20	13:23				
		10/22/20	1630		10/22	1630	5.7			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McCoil

SIGNATURE of SAMPLER:

DATE Signed: 10/22/20

Sample Condition Upon Receipt Form (SCUR)

Project # WO#: 35586989
Project Manager: PM: CTR Due Date: 10/28/20
Client: CLIENT: 36-MACTEC

Date and Initials of person:
Examining contents: S.M.
Label: LP
Deliver:
pH:

Thermometer Used: T343 Date: 10/22/20 Time: 16:30 Initials: J.M.

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	5.7 (Visual)	0.0 (Correction Factor)	5.7 (Actual)	☑ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: 10/22/20 Shorted Time: 1630 Qty: 10

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☐ Yes ☐ No ☑ N/A	Preservation Information: Preservative: Lot #/Trace #: Date: Time: Initials:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☑ N/A	
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 30, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: Miami River
Pace Project No.: 35587314

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - South Florida

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project: Miami River
Pace Project No.: 35587314

Pace Analytical Services South Florida
3610 Park Central Blvd N, Pompano Beach, FL 33064 Florida Certification #: E86240

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: Miami River
Pace Project No.: 35587314

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35587314001	**MRSS1-8**	Water	10/23/20 13:15	10/23/20 18:10

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE ANALYTE COUNT

Project: Miami River
Pace Project No.: 35587314

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35587314001	**MRSS1-8**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF

PASI-SF = Pace Analytical Services - South Florida

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SUMMARY OF DETECTION

Project: Miami River
Pace Project No.: 35587314

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35587314001	**MRSS1-8**					
9223B/Quanti-Tray	E.coli	292	MPN/100mL	10.0	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	63.0	MPN/100mL	10.0	10/24/20 18:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587314

Sample: MRSS1-8 **Lab ID: 35587314001** Collected: 10/23/20 13:15 Received: 10/23/20 18:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**292**	MPN/100mL	10.0	10.0	10	10/23/20 18:32	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**63.0**	MPN/100mL	10.0	10.0	10	10/23/20 18:29	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587314

QC Batch: 677375
QC Batch Method: 9223B/Quanti-Tray
Analysis Method: 9223B/Quanti-Tray
Analysis Description: Colilert MPN
Laboratory: Pace Analytical Services - South Florida

Associated Lab Samples: 35587314001

METHOD BLANK: 3684551 Matrix: Water
Associated Lab Samples: 35587314001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	1.0 U	1.0	1.0	10/24/20 14:35	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587314

QC Batch: 677665
QC Batch Method: Enterolert/Quanti-Tray
Analysis Method: Enterolert/Quanti-Tray
Analysis Description: Enterolert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35587314001

METHOD BLANK: 3686483 Matrix: Water
Associated Lab Samples: 35587314001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Enterococci	MPN/100mL	1.0 U	1.0	1.0	10/24/20 18:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: Miami River
Pace Project No.: 35587314

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

U	Compound was analyzed for but not detected.

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Miami River
Pace Project No.: 35587314

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35587314001	**MRSS1-8**	9223B/Quanti-Tray	677375	9223B/Quanti-Tray	677376
35587314001	**MRSS1-8**	Enterolert/Quanti-Tray	677665	Enterolert/Quanti-Tray	677667

WO# : 35587314

35587314

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Wood E&I
Address:	5845 NW 158th Street
	Miami Lakes, FL 33014
Email:	ashok.aitharaju@woodplc.com
Phone:	(954)695-6796 Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ash Aitharaju
Copy To:	
Purchase Order #:	
Project Name:	Miami River
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	christina.raschke@pacelabs.com,
Pace Profile #:	5651

Regulatory Agency:

State / Location: FL

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	E. Coli MPN	Enterococci	Residual Chlorine (Y/N)
1	MRSS 1-8			10/23	1315				2						X				X	X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Aaron Aguila/Wood	10/23	3:05	PACE	10/23	1505				
	PACE	10/23	1505		10/23	1505				
		10/23/20	1810		10/23	1810	0.3			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McCoil

SIGNATURE of SAMPLER:

DATE Signed: 10/23/20

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt (SCUR)

Project # WO#: 35587314
Project Manager: PM: CTR Due Date: 10/30/20
Client: CLIENT: 36-MACTEC

Date and Initials of person:
Examining contents: LP
Label: LP
Deliver:
pH:

Thermometer Used: T-343 Date: 10/23/20 Time: 1810 Initials: LP

State of Origin: FL ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	0.3 (Visual)	0.0 (Correction Factor)	0.3 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: 10/23/20 Shorted Time: 1810 Qty: 2

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☐ Yes ☐ No ☑ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☑ N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 29, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: Miami River
Pace Project No.: 35587322

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - South Florida

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project: Miami River
Pace Project No.: 35587322

Pace Analytical Services South Florida
3610 Park Central Blvd N, Pompano Beach, FL 33064 Florida Certification #: E86240

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: Miami River
Pace Project No.: 35587322

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35587322001	**MRSS1-10**	Water	10/23/20 09:00	10/23/20 16:00
35587322002	**MRSS1-12**	Water	10/23/20 09:40	10/23/20 16:00
35587322003	**MRSS1-13**	Water	10/23/20 10:00	10/23/20 16:00
35587322004	**MRSS1-14**	Water	10/23/20 11:00	10/23/20 16:00
35587322005	**MRSS1-15**	Water	10/23/20 11:20	10/23/20 16:00

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SAMPLE ANALYTE COUNT

Project: Miami River
Pace Project No.: 35587322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35587322001	**MRSS1-10**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF
35587322002	**MRSS1-12**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF
35587322003	**MRSS1-13**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF
35587322004	**MRSS1-14**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF
35587322005	**MRSS1-15**	9223B/Quanti-Tray	ANM	1	PASI-SF
		Enterolert/Quanti-Tray	ANM	1	PASI-SF

PASI-SF = Pace Analytical Services - South Florida

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Pompano Beach, FL 33064
(954)582-4300

SUMMARY OF DETECTION

Project: Miami River
Pace Project No.: 35587322

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35587322001	**MRSS1-10**					
9223B/Quanti-Tray	E.coli	100	MPN/100mL	100	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	158	MPN/100mL	10.0	10/24/20 18:42	
35587322002	**MRSS1-12**					
9223B/Quanti-Tray	E.coli	200	MPN/100mL	100	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	350	MPN/100mL	10.0	10/24/20 18:42	
35587322003	**MRSS1-13**					
9223B/Quanti-Tray	E.coli	310	MPN/100mL	100	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	1050	MPN/100mL	10.0	10/24/20 18:42	
35587322004	**MRSS1-14**					
9223B/Quanti-Tray	E.coli	410	MPN/100mL	100	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	231	MPN/100mL	10.0	10/24/20 18:42	
35587322005	**MRSS1-15**					
9223B/Quanti-Tray	E.coli	300	MPN/100mL	100	10/24/20 14:35	
Enterolert/Quanti-Tray	Enterococci	305	MPN/100mL	10.0	10/24/20 18:42	

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ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587322

Sample: MRSS1-10 **Lab ID: 35587322001** Collected: 10/23/20 09:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**100**	MPN/100mL	100	100	100	10/23/20 16:42	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**158**	MPN/100mL	10.0	10.0	10	10/23/20 16:51	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587322

Sample: MRSS1-12 **Lab ID: 35587322002** Collected: 10/23/20 09:40 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**200**	MPN/100mL	100	100	100	10/23/20 16:42	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**350**	MPN/100mL	10.0	10.0	10	10/23/20 16:51	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587322

Sample: MRSS1-13 **Lab ID: 35587322003** Collected: 10/23/20 10:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**310**	MPN/100mL	100	100	100	10/23/20 16:42	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**1050**	MPN/100mL	10.0	10.0	10	10/23/20 16:51	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587322

Sample: MRSS1-14 **Lab ID: 35587322004** Collected: 10/23/20 11:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**410**	MPN/100mL	100	100	100	10/23/20 16:42	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**231**	MPN/100mL	10.0	10.0	10	10/23/20 16:51	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587322

Sample: MRSS1-15 **Lab ID: 35587322005** Collected: 10/23/20 11:20 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Colilert/Quanti-Tray MPN	Analytical Method: 9223B/Quanti-Tray Preparation Method: 9223B/Quanti-Tray Pace Analytical Services - South Florida								
E.coli	**300**	MPN/100mL	100	100	100	10/23/20 16:42	10/24/20 14:35		
Enterolert/Quanti-Tray	Analytical Method: Enterolert/Quanti-Tray Preparation Method: Enterolert/Quanti-Tray Pace Analytical Services - South Florida								
Enterococci	**305**	MPN/100mL	10.0	10.0	10	10/23/20 16:51	10/24/20 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587322

QC Batch: 677369
QC Batch Method: 9223B/Quanti-Tray
Analysis Method: 9223B/Quanti-Tray
Analysis Description: Colilert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35587322001, 35587322002, 35587322003, 35587322004, 35587322005

METHOD BLANK: 3684543 Matrix: Water
Associated Lab Samples: 35587322001, 35587322002, 35587322003, 35587322004, 35587322005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
E.coli	MPN/100mL	1.0 U	1.0	1.0	10/24/20 14:35	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587322

QC Batch: 677657
QC Batch Method: Enterolert/Quanti-Tray
Analysis Method: Enterolert/Quanti-Tray
Analysis Description: Enterolert MPN
Laboratory: Pace Analytical Services - South Florida
Associated Lab Samples: 35587322001, 35587322002, 35587322003, 35587322004, 35587322005

METHOD BLANK: 3686464 Matrix: Water
Associated Lab Samples: 35587322001, 35587322002, 35587322003, 35587322004, 35587322005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Enterococci	MPN/100mL	1.0 U	1.0	1.0	10/24/20 18:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: Miami River
Pace Project No.: 35587322

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

U	Compound was analyzed for but not detected.

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Miami River
Pace Project No.: 35587322

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35587322001	**MRSS1-10**	9223B/Quanti-Tray	677369	9223B/Quanti-Tray	677370
35587322002	**MRSS1-12**	9223B/Quanti-Tray	677369	9223B/Quanti-Tray	677370
35587322003	**MRSS1-13**	9223B/Quanti-Tray	677369	9223B/Quanti-Tray	677370
35587322004	**MRSS1-14**	9223B/Quanti-Tray	677369	9223B/Quanti-Tray	677370
35587322005	**MRSS1-15**	9223B/Quanti-Tray	677369	9223B/Quanti-Tray	677370
35587322001	**MRSS1-10**	Enterolert/Quanti-Tray	677657	Enterolert/Quanti-Tray	677658
35587322002	**MRSS1-12**	Enterolert/Quanti-Tray	677657	Enterolert/Quanti-Tray	677658
35587322003	**MRSS1-13**	Enterolert/Quanti-Tray	677657	Enterolert/Quanti-Tray	677658
35587322004	**MRSS1-14**	Enterolert/Quanti-Tray	677657	Enterolert/Quanti-Tray	677658
35587322005	**MRSS1-15**	Enterolert/Quanti-Tray	677657	Enterolert/Quanti-Tray	677658

WO# : 35587322

35587322

Pace Analytical
WWW.PACELABS.COM

HAIN-OF-CUSTODY / Analytical Request Document

e Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Wood E&I	Report To:	Ash Aitharaju	Attention:	
Address:	5845 NW 158th Street	Copy To:		Company Name:	
Miami Lakes, FL 33014				Address:	
Email:	ashok.aitharaju@woodplc.com	Purchase Order #:		Pace Quote:	
Phone:	(954)695-6796 Fax:	Project Name:	Miami River	Pace Project Manager:	christina.raschke@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #	5651

Regulatory Agency
State / Location
FL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): E. Coli MPN	Enterococci	Residual Chlorine (Y/N)
1	MRSS1-10			10/23/20	900				2						X				X	X	
2	MRSS1-12				940				2						X				X	X	
3	MRSS1-13				1000				2						X				X	X	
4	MRSS1-14				1100				2						X				X	X	
5	MRSS1-15				1120				2						X				X	X	
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Kelly McCoil / Wood	10/23/20	1230		10/23/20	1230	
		10/23/20	1600		10/23/20	1600	1.1

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Kelly McCoil				
SIGNATURE of SAMPLER:		DATE Signed:	10/23/20		

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

WO# : 35587322

PM: CTR **Due Date: 10/29/20**

CLIENT: 36-MACTEC

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents: J.A.
Label:
Deliver:
pH:

Thermometer Used: T343 Date: 10/23/20 Time: 1600 Initials: J.A.

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	1.1 **(Visual)**	0.0 **(Correction Factor)**	1.1 **(Actual)**	☑ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☐ Yes ☐ No ☐ N/A	
Correct Containers Used	☐ Yes ☐ No ☐ N/A	
Containers Intact	☐ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☐ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked	☐ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☐ N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☐ N/A	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

ATTACHMENT E

NUTRIENT LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY FORMS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 27, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: MDC Storm Sewer
Pace Project No.: 35586872

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
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(954)582-4300

CERTIFICATIONS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: MDC Storm Sewer
Pace Project No.: 35586872

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35586872001	**MRSS1-1**	Water	10/22/20 09:20	10/22/20 16:30
35586872002	**MRSS1-3**	Water	10/22/20 09:50	10/22/20 16:30
35586872003	**MRSS1-5**	Water	10/22/20 10:30	10/22/20 16:30
35586872004	**MRSS1-9**	Water	10/22/20 11:00	10/22/20 16:30
35586872005	**MRSS1-11**	Water	10/22/20 11:30	10/22/20 16:30

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SAMPLE ANALYTE COUNT

Project: MDC Storm Sewer
Pace Project No.: 35586872

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35586872001	**MRSS1-1**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586872002	**MRSS1-3**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586872003	**MRSS1-5**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586872004	**MRSS1-9**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586872005	**MRSS1-11**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

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SUMMARY OF DETECTION

Project: MDC Storm Sewer
Pace Project No.: 35586872

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35586872001	**MRSS1-1**					
EPA 350.1	Nitrogen, Ammonia	0.48	mg/L	0.050	10/23/20 12:29	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.92	mg/L	0.50	10/27/20 11:06	
EPA 353.2	Nitrogen, NO2 plus NO3	0.22	mg/L	0.050	10/24/20 10:25	
EPA 365.1	Orthophosphate as P	0.0043	mg/L	0.0040	10/23/20 07:24	
35586872002	**MRSS1-3**					
EPA 350.1	Nitrogen, Ammonia	0.65	mg/L	0.050	10/23/20 12:30	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.99	mg/L	0.50	10/27/20 11:10	
EPA 353.2	Nitrogen, NO2 plus NO3	0.17	mg/L	0.050	10/24/20 10:32	
EPA 365.1	Orthophosphate as P	0.0057	mg/L	0.0040	10/23/20 07:28	
35586872003	**MRSS1-5**					
EPA 350.1	Nitrogen, Ammonia	0.67	mg/L	0.050	10/23/20 12:32	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.0	mg/L	0.50	10/27/20 11:11	
EPA 353.2	Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	10/24/20 10:33	
35586872004	**MRSS1-9**					
EPA 350.1	Nitrogen, Ammonia	0.32	mg/L	0.050	10/23/20 12:34	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.60	mg/L	0.50	10/27/20 11:12	
EPA 353.2	Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	10/24/20 10:34	
EPA 365.1	Orthophosphate as P	0.019	mg/L	0.0040	10/23/20 07:37	
35586872005	**MRSS1-11**					
EPA 350.1	Nitrogen, Ammonia	0.33	mg/L	0.050	10/23/20 12:35	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.54	mg/L	0.50	10/27/20 11:15	
EPA 353.2	Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	10/24/20 10:35	
EPA 365.1	Orthophosphate as P	0.031	mg/L	0.0040	10/23/20 07:39	

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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Sample: MRSS1-1 **Lab ID: 35586872001** Collected: 10/22/20 09:20 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.48**	mg/L	0.050	0.035	1		10/23/20 12:29	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.92**	mg/L	0.50	0.086	1	10/26/20 11:31	10/27/20 11:06	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.22**	mg/L	0.050	0.033	1		10/24/20 10:25		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.0043**	mg/L	0.0040	0.0038	1		10/23/20 07:24		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/26/20 11:31	10/27/20 11:06	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Sample: MRSS1-3 **Lab ID: 35586872002** Collected: 10/22/20 09:50 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.65**	mg/L	0.050	0.035	1		10/23/20 12:30	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.99**	mg/L	0.50	0.086	1	10/26/20 11:31	10/27/20 11:10	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.17**	mg/L	0.050	0.033	1		10/24/20 10:32		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.0057**	mg/L	0.0040	0.0038	1		10/23/20 07:28		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/26/20 11:31	10/27/20 11:10	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Sample: MRSS1-5 **Lab ID: 35586872003** Collected: 10/22/20 10:30 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.67**	mg/L	0.050	0.035	1		10/23/20 12:32	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**1.0**	mg/L	0.50	0.086	1	10/26/20 11:31	10/27/20 11:11	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.050	0.033	1		10/24/20 10:33		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.0038 U**	mg/L	0.0040	0.0038	1		10/23/20 07:32		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/26/20 11:31	10/27/20 11:11	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Sample: MRSS1-9 **Lab ID: 35586872004** Collected: 10/22/20 11:00 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.32**	mg/L	0.050	0.035	1		10/23/20 12:34	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.60**	mg/L	0.50	0.086	1	10/26/20 11:31	10/27/20 11:12	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.050	0.033	1		10/24/20 10:34		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.019**	mg/L	0.0040	0.0038	1		10/23/20 07:37		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/26/20 11:31	10/27/20 11:12	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586872

Sample: MRSS1-11 **Lab ID: 35586872005** Collected: 10/22/20 11:30 Received: 10/22/20 16:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.33**	mg/L	0.050	0.035	1		10/23/20 12:35	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.54**	mg/L	0.50	0.086	1	10/26/20 11:31	10/27/20 11:15	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.050	0.033	1		10/24/20 10:35		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.031**	mg/L	0.0040	0.0038	1		10/23/20 07:39		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/26/20 11:31	10/27/20 11:15	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586872

QC Batch: 676110 — Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 — Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

METHOD BLANK: 3677910 — Matrix: Water
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.035 U	0.050	0.035	10/23/20 11:47	

LABORATORY CONTROL SAMPLE: 3677911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677913 — 3677912

Parameter	Units	35585215001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.090	1	1	1.1	1.1	100	100	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677914 — 3677915

Parameter	Units	35586879001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.33	1	1	1.3	1.3	99	100	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586872

QC Batch: 676492 — Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 — Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

METHOD BLANK: 3680357 — Matrix: Water
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	0.086	10/27/20 10:42	

LABORATORY CONTROL SAMPLE: 3680358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	19.5	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680360 — 3680359

Parameter	Units	35585234015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	0.33 I	20	20	19.5	19.5	96	96	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680362 — 3680361

Parameter	Units	35586872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	0.92	20	20	20.8	20.6	99	98	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586872

QC Batch: 676356 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

METHOD BLANK: 3679692 — Matrix: Water
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	10/24/20 10:23	

LABORATORY CONTROL SAMPLE: 3679693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679695 — 3679694

Parameter	Units	35586872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.22	2	2	2.4	2.2	107	101	90-110	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679697 — 3679696

Parameter	Units	35586629005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.81	2	2	2.8	2.8	101	102	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586872

QC Batch: 676043 — Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 — Analysis Description: 365.1 Orthophosphate as P
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

METHOD BLANK: 3677711 — Matrix: Water
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0038 U	0.0040	0.0038	10/23/20 07:14	

LABORATORY CONTROL SAMPLE: 3677712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.1	0.096	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677714 — 3677713

Parameter	Units	35586668001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.12	0.1	0.1	0.22	0.22	103	105	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677716 — 3677715

Parameter	Units	35586693003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.25	0.1	0.1	0.34	0.33	90	75	90-110	5	20	J(M1)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586872

QC Batch: 676494 — Analysis Method: EPA 365.4
QC Batch Method: EPA 365.4 — Analysis Description: 365.4 Phosphorus
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

METHOD BLANK: 3680369 — Matrix: Water
Associated Lab Samples: 35586872001, 35586872002, 35586872003, 35586872004, 35586872005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	0.050	10/27/20 11:16	

LABORATORY CONTROL SAMPLE: 3680370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	4.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680372 3680371

Parameter	Units	35586872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	0.050 U	4	4	4.0	4.0	99	99	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: MDC Storm Sewer
Pace Project No.: 35586872

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MDC Storm Sewer
Pace Project No.: 35586872

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35586872001	**MRSS1-1**	EPA 350.1	676110		
35586872002	**MRSS1-3**	EPA 350.1	676110		
35586872003	**MRSS1-5**	EPA 350.1	676110		
35586872004	**MRSS1-9**	EPA 350.1	676110		
35586872005	**MRSS1-11**	EPA 350.1	676110		
35586872001	**MRSS1-1**	EPA 351.2	676492	EPA 351.2	676907
35586872002	**MRSS1-3**	EPA 351.2	676492	EPA 351.2	676907
35586872003	**MRSS1-5**	EPA 351.2	676492	EPA 351.2	676907
35586872004	**MRSS1-9**	EPA 351.2	676492	EPA 351.2	676907
35586872005	**MRSS1-11**	EPA 351.2	676492	EPA 351.2	676907
35586872001	**MRSS1-1**	EPA 353.2	676356		
35586872002	**MRSS1-3**	EPA 353.2	676356		
35586872003	**MRSS1-5**	EPA 353.2	676356		
35586872004	**MRSS1-9**	EPA 353.2	676356		
35586872005	**MRSS1-11**	EPA 353.2	676356		
35586872001	**MRSS1-1**	EPA 365.1	676043		
35586872002	**MRSS1-3**	EPA 365.1	676043		
35586872003	**MRSS1-5**	EPA 365.1	676043		
35586872004	**MRSS1-9**	EPA 365.1	676043		
35586872005	**MRSS1-11**	EPA 365.1	676043		
35586872001	**MRSS1-1**	EPA 365.4	676494	EPA 365.4	676910
35586872002	**MRSS1-3**	EPA 365.4	676494	EPA 365.4	676910
35586872003	**MRSS1-5**	EPA 365.4	676494	EPA 365.4	676910
35586872004	**MRSS1-9**	EPA 365.4	676494	EPA 365.4	676910
35586872005	**MRSS1-11**	EPA 365.4	676494	EPA 365.4	676910

WO# : 35586872

35586872

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Wood E&I
Address:	5845 NW 158th Street
	Miami Lakes, FL 33014
Email:	ashok.aitharaju@woodplc.com
Phone:	(954)695-6796 Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ash Aitharaju
Copy To:	
Purchase Order #:	
Project Name:	MDC Storm Sewer
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	christina.raschke@pacelabs.com
Pace Profile #:	5651

Regulatory Agency:

State / Location: FL

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATR X	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test: Ammonia	Nitrate+Nitrite (NOx)	TKN	Total Phosphorus	Orthophosphate (PO4)	Residual Chlorine (Y/N)
1	~~LRSS1-1~~ MRSS1-1			10/22/20	0920				2	X	X							X	X	X	X	X	
2	~~LRSS1-3~~ MRSS1-3			10/22/20	0950				2	X	X							X	X	X	X	X	
3	~~LRSS1-5~~ MRSS1-5			10/22/20	1030				2	X	X							X	X	X	X	X	
4	~~LRSS1-9~~ MRSS1-9			10/22/20	1100				2	X	X							X	X	X	X	X	
5	~~LRSS1-11~~ MRSS1-11			10/22/20	1130				2	X	X							X	X	X	X	X	
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Kelly McCoil/Wood	10/22/20	1323		10/22/20	13:23				
		10/22/20	1630		10/22/20	1630	5.7			
		10/22	1900	TRB/Pace	10/22/20	2300	4.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McCoil

SIGNATURE of SAMPLER:

DATE Signed: 10/22/20

Sample Condition Upon Receipt Form (SCUR)

Project # WO#: 35586872
Project Manager: PM: CTR Due Date: 10/28/20
Client: CLIENT: 36-MACTEC

Date and Initials of person:
Examining contents: TRB
Label:
Deliver:
pH: TRB

Thermometer Used: T-353 Date: 10/22/20 Time: 23:12 Initials: TRB

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	3-9 (Visual)	10.3 (Correction Factor)	4.2 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals intact:** ☑ Yes ☐ No **Ice:** Wet Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

Comments:

Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☑ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Sample Condition Upon Receipt Form (SCUR)

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents: S.M.
Label:
Deliver:
pH:

Thermometer Used: T343 Date: 10/22/20 Time: 16:30 Initials: J.M.

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	5.7 **(Visual)**	0.0 **(Correction Factor)**	5.7 **(Actual)**	☑ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☐ Yes ☐ No ☐ N/A	
Correct Containers Used	☐ Yes ☐ No ☐ N/A	
Containers Intact	☐ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☐ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☐ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☐ N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☐ N/A	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 28, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: MDC Storm Sewer
Pace Project No.: 35586873

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project: MDC Storm Sewer
Pace Project No.: 35586873

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: MDC Storm Sewer
Pace Project No.: 35586873

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35586873001	**MRSS1-2**	Water	10/22/20 13:45	10/22/20 17:30
35586873002	**MRSS1-4**	Water	10/22/20 14:30	10/22/20 17:30
35586873003	**MRSS1-6**	Water	10/22/20 14:50	10/22/20 17:30
35586873004	**MRSS1-7**	Water	10/22/20 15:25	10/22/20 17:30

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

SAMPLE ANALYTE COUNT

Project: MDC Storm Sewer
Pace Project No.: 35586873

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35586873001	**MRSS1-2**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586873002	**MRSS1-4**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586873003	**MRSS1-6**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35586873004	**MRSS1-7**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SUMMARY OF DETECTION

Project: MDC Storm Sewer
Pace Project No.: 35586873

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35586873001	**MRSS1-2**					
EPA 351.2	Nitrogen, Kjeldahl, Total	0.38 I	mg/L	0.50	10/28/20 08:23	
EPA 353.2	Nitrogen, NO2 plus NO3	0.26	mg/L	0.050	10/24/20 10:52	
EPA 365.1	Orthophosphate as P	0.018	mg/L	0.0040	10/23/20 07:42	
EPA 365.4	Phosphorus, Total (as P)	0.065 I	mg/L	0.10	10/28/20 08:23	
35586873002	**MRSS1-4**					
EPA 350.1	Nitrogen, Ammonia	0.041 I	mg/L	0.050	10/23/20 13:09	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.29 I	mg/L	0.50	10/28/20 08:26	
EPA 353.2	Nitrogen, NO2 plus NO3	0.50	mg/L	0.050	10/24/20 10:53	
EPA 365.1	Orthophosphate as P	0.031	mg/L	0.0040	10/23/20 07:43	
35586873003	**MRSS1-6**					
EPA 351.2	Nitrogen, Kjeldahl, Total	0.77	mg/L	0.50	10/28/20 08:28	
EPA 353.2	Nitrogen, NO2 plus NO3	0.038 I	mg/L	0.050	10/24/20 10:55	
EPA 365.1	Orthophosphate as P	0.013	mg/L	0.0040	10/23/20 07:44	
EPA 365.4	Phosphorus, Total (as P)	0.056 I	mg/L	0.10	10/28/20 08:28	
35586873004	**MRSS1-7**					
EPA 350.1	Nitrogen, Ammonia	0.18	mg/L	0.050	10/23/20 13:16	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.82	mg/L	0.50	10/28/20 08:29	
EPA 353.2	Nitrogen, NO2 plus NO3	0.070	mg/L	0.050	10/24/20 10:56	
EPA 365.1	Orthophosphate as P	0.031	mg/L	0.0040	10/23/20 07:45	
EPA 365.4	Phosphorus, Total (as P)	0.16	mg/L	0.10	10/28/20 08:29	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586873

Sample: MRSS1-2 **Lab ID: 35586873001** Collected: 10/22/20 13:45 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.035 U**	mg/L	0.050	0.035	1		10/23/20 13:07	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.38 I**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 08:23	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.26**	mg/L	0.050	0.033	1		10/24/20 10:52		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.018**	mg/L	0.0040	0.0038	1		10/23/20 07:42		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.065 I**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 08:23	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586873

Sample: MRSS1-4 **Lab ID: 35586873002** Collected: 10/22/20 14:30 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.041 I**	mg/L	0.050	0.035	1		10/23/20 13:09	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.29 I**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 08:26	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.50**	mg/L	0.050	0.033	1		10/24/20 10:53		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.031**	mg/L	0.0040	0.0038	1		10/23/20 07:43		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 08:26	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586873

Sample: MRSS1-6 **Lab ID: 35586873003** Collected: 10/22/20 14:50 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.035 U**	mg/L	0.050	0.035	1		10/23/20 13:11	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.77**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 08:28	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.038 I**	mg/L	0.050	0.033	1		10/24/20 10:55		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.013**	mg/L	0.0040	0.0038	1		10/23/20 07:44		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.056 I**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 08:28	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: MDC Storm Sewer
Pace Project No.: 35586873

Sample: MRSS1-7 **Lab ID: 35586873004** Collected: 10/22/20 15:25 Received: 10/22/20 17:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.18**	mg/L	0.050	0.035	1		10/23/20 13:16	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.82**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 08:29	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.070**	mg/L	0.050	0.033	1		10/24/20 10:56		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.031**	mg/L	0.0040	0.0038	1		10/23/20 07:45		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.16**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 08:29	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586873

QC Batch: 676112 — Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 — Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

METHOD BLANK: 3677920 — Matrix: Water
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.035 U	0.050	0.035	10/23/20 12:40	

LABORATORY CONTROL SAMPLE: 3677921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677923 — 3677922

Parameter	Units	35586642003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	ND	1	1	1.0	1.1	101	101	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677924 — 3677925

Parameter	Units	35586873003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.035 U	1	1	1.0	1.1	101	102	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586873

QC Batch: 676732 — Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 — Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

METHOD BLANK: 3681159 — Matrix: Water
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	0.086	10/28/20 08:06	

LABORATORY CONTROL SAMPLE: 3681160

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	18.4	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681162 — 3681161

Parameter	Units	35586415010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	33.8	40	40	76.0	76.6	106	107	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681164 — 3681163

Parameter	Units	35586873001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	0.38 I	20	20	19.4	19.5	95	96	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586873

QC Batch: 676356 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

METHOD BLANK: 3679692 — Matrix: Water
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	10/24/20 10:23	

LABORATORY CONTROL SAMPLE: 3679693

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679695 — 3679694

Parameter	Units	35586872001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.22	2	2	2.4	2.2	107	101	90-110	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679697 — 3679696

Parameter	Units	35586629005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.81	2	2	2.8	2.8	101	102	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586873

QC Batch: 676043 — Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 — Analysis Description: 365.1 Orthophosphate as P
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

METHOD BLANK: 3677711 — Matrix: Water
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0038 U	0.0040	0.0038	10/23/20 07:14	

LABORATORY CONTROL SAMPLE: 3677712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.1	0.096	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677714 — 3677713

Parameter	Units	35586668001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.12	0.1	0.1	0.22	0.22	103	105	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3677716 — 3677715

Parameter	Units	35586693003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.25	0.1	0.1	0.34	0.33	90	75	90-110	5	20	J(M1)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: MDC Storm Sewer
Pace Project No.: 35586873

QC Batch: 676733 — Analysis Method: EPA 365.4
QC Batch Method: EPA 365.4 — Analysis Description: 365.4 Phosphorus
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

METHOD BLANK: 3681165 — Matrix: Water
Associated Lab Samples: 35586873001, 35586873002, 35586873003, 35586873004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	0.050	10/28/20 08:37	

LABORATORY CONTROL SAMPLE: 3681166

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	3.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681168 — 3681167

Parameter	Units	35586415010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	4.4	8	8	12.4	12.5	99	100	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681170 — 3681169

Parameter	Units	35586873001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	0.065 I	4	4	3.9	4.0	97	97	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: MDC Storm Sewer
Pace Project No.: 35586873

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MDC Storm Sewer
Pace Project No.: 35586873

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35586873001	**MRSS1-2**	EPA 350.1	676112		
35586873002	**MRSS1-4**	EPA 350.1	676112		
35586873003	**MRSS1-6**	EPA 350.1	676112		
35586873004	**MRSS1-7**	EPA 350.1	676112		
35586873001	**MRSS1-2**	EPA 351.2	676732	EPA 351.2	677209
35586873002	**MRSS1-4**	EPA 351.2	676732	EPA 351.2	677209
35586873003	**MRSS1-6**	EPA 351.2	676732	EPA 351.2	677209
35586873004	**MRSS1-7**	EPA 351.2	676732	EPA 351.2	677209
35586873001	**MRSS1-2**	EPA 353.2	676356		
35586873002	**MRSS1-4**	EPA 353.2	676356		
35586873003	**MRSS1-6**	EPA 353.2	676356		
35586873004	**MRSS1-7**	EPA 353.2	676356		
35586873001	**MRSS1-2**	EPA 365.1	676043		
35586873002	**MRSS1-4**	EPA 365.1	676043		
35586873003	**MRSS1-6**	EPA 365.1	676043		
35586873004	**MRSS1-7**	EPA 365.1	676043		
35586873001	**MRSS1-2**	EPA 365.4	676733	EPA 365.4	677211
35586873002	**MRSS1-4**	EPA 365.4	676733	EPA 365.4	677211
35586873003	**MRSS1-6**	EPA 365.4	676733	EPA 365.4	677211
35586873004	**MRSS1-7**	EPA 365.4	676733	EPA 365.4	677211

WO# : 35586873

35586873

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Wood E&I	Report To:	Ash Aitharaju	Attention:	
Address:	5845 NW 158th Street	Copy To:		Company Name:	
Miami Lakes, FL 33014				Address:	
Email:	ashok.aitharaju@woodplc.com	Purchase Order #:		Pace Quote:	
Phone:	(954)695-6796 Fax:	Project Name:	MDC Storm Sewer	Pace Project Manager:	christina.raschke@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	5651

Regulatory Agency	State / Location
	FL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Ammonia	Nitrate+Nitrite (NOx)	TKN	Total Phosphorus	Orthophosphate (PO4)	Residual Chlorine (Y/N)
1	MRSS1-2			10/22/20	1345				2	X	X								X	X	X	X	X	
2	MRSS1-4				1430				2	X	X								X	X	X	X	X	
3	MRSS1-6				1450				2	X	X								X	X	X	X	X	
4	MRSS1-7				1525				2	X	X								X	X	X	X	X	
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Kelly McCoi / Wood	10/22/20	1730	UPS / Pace	10/22	1730	6.7			
	UPS / Pace	10/22	1900	TRS/Pace	10/22/20	2306	4.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Kelly McCoi					
SIGNATURE of SAMPLER:		DATE Signed: 10/22/20				

Sample Condition Upon Receipt Form (SCUR)

Project # WO#: 35586873

Project Manager: PM: CTR **Due Date:** 10/29/20

Client: CLIENT: 36-MACTEC

Date and Initials of person:
Examining contents: TPB
Label:
Deliver:
pH: TPB

Thermometer Used: T-355 Date: 10/22/20 Time: 23:12 Initials: TPB

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	3.9 (Visual)	10.3 (Correction Factor)	4.2 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals intact:** ☑ Yes ☐ No **Ice:** ~~Wet~~ Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked. All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A ☑ Yes ☐ No ☐ N/A	Preservation Information: Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Sample Condition Upon Receipt Form (SCUR)

Project #
Project Manager:
Client:

Date and Initials of person:
Examining contents: LM
Label:
Deliver:
pH:

Thermometer Used: T3M3 Date: 10/22/20 Time: 1730 Initials: LP

State of Origin: FL ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	6.7 **(Visual)**	0.0 **(Correction Factor)**	6.7 **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☐ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑Yes ☐ No ☐N/A	
Chain of Custody Filled Out	☑Yes ☐ No ☐N/A	
Relinquished Signature & Sampler Name COC	☑Yes ☐ No ☐N/A	
Samples Arrived within Hold Time	☑Yes ☐ No ☐N/A	
Rush TAT requested on COC	☐Yes ☑ No ☐N/A	
Sufficient Volume	☐Yes ☐ No ☐N/A	
Correct Containers Used	☐Yes ☐ No ☐N/A	
Containers Intact	☐Yes ☐ No ☐N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☐Yes ☐ No ☐N/A	
All containers needing acid/base preservation have been checked.	☐Yes ☐ No ☐N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐Yes ☐ No ☐N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐Yes ☐ No ☐N/A	
Trip Blank Present:	☐Yes ☐ No ☐N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 28, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: Miami River
Pace Project No.: 35587159

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project: Miami River
Pace Project No.: 35587159

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: Miami River
Pace Project No.: 35587159

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35587159001	**MRSS1-10**	Water	10/23/20 09:00	10/23/20 16:00
35587159002	**MRSS1-12**	Water	10/23/20 09:40	10/23/20 16:00
35587159003	**MRSS1-13**	Water	10/23/20 10:00	10/23/20 16:00
35587159004	**MRSS1-14**	Water	10/23/20 11:00	10/23/20 16:00
35587159005	**MRSS1-15**	Water	10/23/20 11:20	10/23/20 16:00

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SAMPLE ANALYTE COUNT

Project: Miami River
Pace Project No.: 35587159

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35587159001	**MRSS1-10**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35587159002	**MRSS1-12**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35587159003	**MRSS1-13**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35587159004	**MRSS1-14**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O
35587159005	**MRSS1-15**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	CLL	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

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SUMMARY OF DETECTION

Project: Miami River
Pace Project No.: 35587159

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35587159001	**MRSS1-10**					
EPA 350.1	Nitrogen, Ammonia	0.059	mg/L	0.050	10/26/20 11:44	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.32 I	mg/L	0.50	10/28/20 09:06	
EPA 353.2	Nitrogen, NO2 plus NO3	0.16	mg/L	0.050	10/24/20 11:23	
EPA 365.1	Orthophosphate as P	0.043	mg/L	0.0040	10/24/20 11:44	
EPA 365.4	Phosphorus, Total (as P)	0.055 I	mg/L	0.10	10/28/20 09:06	
35587159002	**MRSS1-12**					
EPA 350.1	Nitrogen, Ammonia	0.40	mg/L	0.050	10/26/20 11:49	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.51	mg/L	0.50	10/28/20 09:07	
EPA 353.2	Nitrogen, NO2 plus NO3	0.13	mg/L	0.050	10/24/20 11:24	
EPA 365.1	Orthophosphate as P	0.052	mg/L	0.0040	10/24/20 11:45	
EPA 365.4	Phosphorus, Total (as P)	0.059 I	mg/L	0.10	10/28/20 09:07	
35587159003	**MRSS1-13**					
EPA 350.1	Nitrogen, Ammonia	0.14	mg/L	0.050	10/26/20 11:51	
EPA 351.2	Nitrogen, Kjeldahl, Total	0.33 I	mg/L	0.50	10/28/20 09:08	
EPA 353.2	Nitrogen, NO2 plus NO3	0.33	mg/L	0.050	10/24/20 11:30	
EPA 365.1	Orthophosphate as P	0.048	mg/L	0.0040	10/24/20 11:46	
EPA 365.4	Phosphorus, Total (as P)	0.058 I	mg/L	0.10	10/28/20 09:08	
35587159004	**MRSS1-14**					
EPA 350.1	Nitrogen, Ammonia	0.74	mg/L	0.050	10/26/20 11:52	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.1	mg/L	0.50	10/28/20 09:12	
EPA 353.2	Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	10/24/20 11:32	
EPA 365.1	Orthophosphate as P	0.0041	mg/L	0.0040	10/24/20 11:48	
35587159005	**MRSS1-15**					
EPA 350.1	Nitrogen, Ammonia	0.83	mg/L	0.050	10/26/20 11:54	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.2	mg/L	0.50	10/28/20 09:15	
EPA 353.2	Nitrogen, NO2 plus NO3	0.15	mg/L	0.050	10/24/20 11:33	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587159

Sample: MRSS1-10 **Lab ID: 35587159001** Collected: 10/23/20 09:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.059**	mg/L	0.050	0.035	1		10/26/20 11:44	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.32**	I mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 09:06	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.16**	mg/L	0.050	0.033	1		10/24/20 11:23		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.043**	mg/L	0.0040	0.0038	1		10/24/20 11:44		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.055**	I mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 09:06	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587159

Sample: MRSS1-12 **Lab ID: 35587159002** Collected: 10/23/20 09:40 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.40**	mg/L	0.050	0.035	1		10/26/20 11:49	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.51**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 09:07	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.13**	mg/L	0.050	0.033	1		10/24/20 11:24		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.052**	mg/L	0.0040	0.0038	1		10/24/20 11:45		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.059 I**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 09:07	7723-14-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587159

Sample: MRSS1-13 **Lab ID: 35587159003** Collected: 10/23/20 10:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.14**	mg/L	0.050	0.035	1		10/26/20 11:51	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**0.33 I**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 09:08	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.33**	mg/L	0.050	0.033	1		10/24/20 11:30		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.048**	mg/L	0.0040	0.0038	1		10/24/20 11:46		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.058 I**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 09:08	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587159

Sample: MRSS1-14 **Lab ID: 35587159004** Collected: 10/23/20 11:00 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.74**	mg/L	0.050	0.035	1		10/26/20 11:52	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**1.1**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 09:12	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.050	0.033	1		10/24/20 11:32		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.0041**	mg/L	0.0040	0.0038	1		10/24/20 11:48		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 09:12	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587159

Sample: MRSS1-15 **Lab ID: 35587159005** Collected: 10/23/20 11:20 Received: 10/23/20 16:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**0.83**	mg/L	0.050	0.035	1		10/26/20 11:54	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**1.2**	mg/L	0.50	0.086	1	10/27/20 10:58	10/28/20 09:15	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.15**	mg/L	0.050	0.033	1		10/24/20 11:33		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.0038 U**	mg/L	0.0040	0.0038	1		10/24/20 11:52		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.050 U**	mg/L	0.10	0.050	1	10/27/20 10:58	10/28/20 09:15	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587159

QC Batch: 676609
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

METHOD BLANK: 3680655 Matrix: Water
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.035 U	0.050	0.035	10/26/20 11:40	

LABORATORY CONTROL SAMPLE: 3680656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680658 3680657

Parameter	Units	35587159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.059	1	1	1.1	1.1	99	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680659 3680660

Parameter	Units	35587063004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.035	1	1	1.0	1.1	101	107	90-110	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587159

QC Batch: 676734 — Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 — Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

METHOD BLANK: 3681171 — Matrix: Water
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	0.086	10/28/20 08:46	

LABORATORY CONTROL SAMPLE: 3681172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	18.9	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681174 — 3681173

Parameter	Units	35586903006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	6.4	20	20	25.8	26.1	97	99	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681176 — 3681175

Parameter	Units	35587159004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	1.1	20	20	20.2	20.2	96	96	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587159

QC Batch: 676357 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

METHOD BLANK: 3679700 — Matrix: Water
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	10/24/20 11:04	

LABORATORY CONTROL SAMPLE: 3679701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679703 — 3679702

Parameter	Units	35586903004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	4.8	2	2	6.1	6.1	63	62	90-110	0	20	J(M1), L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679705 — 3679704

Parameter	Units	35587159002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.13	2	2	2.2	2.2	104	103	90-110	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587159

QC Batch: 676368
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Orthophosphate as P
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

METHOD BLANK: 3679761 Matrix: Water
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0038 U	0.0040	0.0038	10/24/20 11:38	

LABORATORY CONTROL SAMPLE: 3679762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.1	0.094	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679764 3679763

Parameter	Units	35585574004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.0038 U	0.1	0.1	0.096	0.093	95	92	90-110	3	20	Q

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679766 3679765

Parameter	Units	35587168001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.098	0.1	0.1	0.20	0.20	101	100	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587159

QC Batch: 676735
QC Batch Method: EPA 365.4
Analysis Method: EPA 365.4
Analysis Description: 365.4 Phosphorus
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

METHOD BLANK: 3681177 Matrix: Water
Associated Lab Samples: 35587159001, 35587159002, 35587159003, 35587159004, 35587159005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	0.050	10/28/20 09:16	

LABORATORY CONTROL SAMPLE: 3681178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	3.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681180 3681179

Parameter	Units	35586903006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	1.2	4	4	5.2	5.2	98	100	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681182 3681181

Parameter	Units	35587159004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	0.050 U	4	4	3.9	3.9	97	97	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: Miami River
Pace Project No.: 35587159

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
L	Off-scale high. Actual value is known to be greater than value given.
Q	Sample held beyond the accepted holding time.

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Miami River
Pace Project No.: 35587159

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35587159001	**MRSS1-10**	EPA 350.1	676609		
35587159002	**MRSS1-12**	EPA 350.1	676609		
35587159003	**MRSS1-13**	EPA 350.1	676609		
35587159004	**MRSS1-14**	EPA 350.1	676609		
35587159005	**MRSS1-15**	EPA 350.1	676609		
35587159001	**MRSS1-10**	EPA 351.2	676734	EPA 351.2	677221
35587159002	**MRSS1-12**	EPA 351.2	676734	EPA 351.2	677221
35587159003	**MRSS1-13**	EPA 351.2	676734	EPA 351.2	677221
35587159004	**MRSS1-14**	EPA 351.2	676734	EPA 351.2	677221
35587159005	**MRSS1-15**	EPA 351.2	676734	EPA 351.2	677221
35587159001	**MRSS1-10**	EPA 353.2	676357		
35587159002	**MRSS1-12**	EPA 353.2	676357		
35587159003	**MRSS1-13**	EPA 353.2	676357		
35587159004	**MRSS1-14**	EPA 353.2	676357		
35587159005	**MRSS1-15**	EPA 353.2	676357		
35587159001	**MRSS1-10**	EPA 365.1	676368		
35587159002	**MRSS1-12**	EPA 365.1	676368		
35587159003	**MRSS1-13**	EPA 365.1	676368		
35587159004	**MRSS1-14**	EPA 365.1	676368		
35587159005	**MRSS1-15**	EPA 365.1	676368		
35587159001	**MRSS1-10**	EPA 365.4	676735	EPA 365.4	677222
35587159002	**MRSS1-12**	EPA 365.4	676735	EPA 365.4	677222
35587159003	**MRSS1-13**	EPA 365.4	676735	EPA 365.4	677222
35587159004	**MRSS1-14**	EPA 365.4	676735	EPA 365.4	677222
35587159005	**MRSS1-15**	EPA 365.4	676735	EPA 365.4	677222

WO# : 35587159

35587159

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Wood E&I
Address:	5845 NW 158th Street
	Miami Lakes, FL 33014
Email:	ashok.aitharaju@woodplc.com
Phone:	(954)695-6796 Fax:
Requested Due Date:	

Section B — Required Project Information:

Report To:	Ash Aitharaju
Copy To:	
Purchase Order #:	
Project Name:	Miami River
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	christina.raschke@pacelabs.com,
Pace Profile #:	5651

Regulatory Agency:

State / Location: FL

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Ammonia	Nitrate+Nitrite (NOx)	TKN	Total Phosphorus	Orthophosphate (PO4)	Residual Chlorine (Y/N)
1	MRSS1-10			10/23/20	0900				2	X	X							X	X	X	X	X	
2	MRSS1-12				0940				2	X	X							X	X	X	X	X	
3	MRSS1-13				1000				2	X	X							X	X	X	X	X	
4	MRSS1-14				1100				2	X	X							X	X	X	X	X	
5	MRSS1-15				1120				2	X	X							X	X	X	X	X	
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Kelly McCoil / Wood	10/23/20	1130		10/23/20	1230				
		10/23/20	1600		10/23	1600	1.1			
		10/23/20	1900	TRB/Pace	10/23/20	23:30	5.2c	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McCoil

SIGNATURE of SAMPLER: Kelly McCoil

DATE Signed: 10/23/20

Sample Condition Upon Receipt Form (SCUR)

Project # **WO# : 35587159**

Project Manager **PM: CTR** **Due Date: 10/29/20**

Client: **CLIENT: 36-MACTEC**

Date and Initials of person:
Examining contents: TRB
Label: _____
Deliver: _____
pH: TRB

Thermometer Used: T-349 Date: 10/23/20 Time: 23:45 Initials: S.C.L

State of Origin: _____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	5.3 (Visual)	-0.1 (Correction Factor)	5.2 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ (Visual)	_____ (Correction Factor)	_____ (Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other _____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other _____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals intact:** ☑ Yes ☐ No **Ice:** ☑ Wet ☐ Blue ☐ Dry ☐ None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

Samples shorted to lab (If Yes, complete) Shorted Date: _____ Shorted Time: _____ Qty: _____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked	☑ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A	Preservative: _____ Lot #/Trace #: _____ Date: _____ Time: _____ Initials: _____
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ Date: _____

Sample Condition Upon Receipt Form (SCUR)

Project #
Project Manager:
Client:

Date and Initials of person:
Examining contents: J.A.
Label:
Deliver:
pH:

Thermometer Used: T343 Date: 10/23/20 Time: 1600 Initials: J.A.

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C 1.1	**(Visual)** 0.0	**(Correction Factor)** 1.1	**(Actual)**	☑ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	**(Visual)**	**(Correction Factor)**	**(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking #

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals Intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Samples shorted to lab (If Yes, complete) Shorted Date: Shorted Time: Qty:

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☐ Yes ☐ No ☐ N/A	
Correct Containers Used	☐ Yes ☐ No ☐ N/A	
Containers Intact	☐ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☐ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☐ Yes ☐ No ☐ N/A	Preservation Information:
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☐ Yes ☐ No ☐ N/A	Preservative: Lot #/Trace #: Date: Time: Initials:
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☐ N/A	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	

Client Notification/ Resolution:
Person Contacted: Date/Time:

Comments/ Resolution (use back for additional comments):

Project Manager Review: Date:

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

October 28, 2020

Ash Aitharaju
Wood E&I
5845 NW 158th Street
Miami Lakes, FL 33014

RE: Project: Miami River
Pace Project No.: 35587168

Dear Ash Aitharaju:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Christina Raschke
christina.raschke@pacelabs.com
(954)582-4300
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

CERTIFICATIONS

Project: Miami River
Pace Project No.: 35587168

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE SUMMARY

Project: Miami River
Pace Project No.: 35587168

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35587168001	**MRSS1-8**	Water	10/23/20 13:15	10/23/20 18:10

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SAMPLE ANALYTE COUNT

Project: Miami River
Pace Project No.: 35587168

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35587168001	**MRSS1-8**	EPA 350.1	RRB	1	PASI-O
		EPA 351.2	LNR	1	PASI-O
		EPA 353.2	TM3	1	PASI-O
		EPA 365.1	CLL	1	PASI-O
		EPA 365.4	LNR	1	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

SUMMARY OF DETECTION

Project: Miami River
Pace Project No.: 35587168

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
35587168001	**MRSS1-8**					
EPA 350.1	Nitrogen, Ammonia	1.6	mg/L	0.050	10/26/20 11:56	
EPA 351.2	Nitrogen, Kjeldahl, Total	1.6	mg/L	0.50	10/28/20 10:22	
EPA 365.1	Orthophosphate as P	0.098	mg/L	0.0040	10/24/20 11:56	
EPA 365.4	Phosphorus, Total (as P)	0.12	mg/L	0.10	10/28/20 10:22	

Pace Analytical Services, LLC
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(954)582-4300

ANALYTICAL RESULTS

Project: Miami River
Pace Project No.: 35587168

Sample: MRSS1-8 **Lab ID: 35587168001** Collected: 10/23/20 13:15 Received: 10/23/20 18:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1 Pace Analytical Services - Ormond Beach								
Nitrogen, Ammonia	**1.6**	mg/L	0.050	0.035	1		10/26/20 11:56	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2 Pace Analytical Services - Ormond Beach								
Nitrogen, Kjeldahl, Total	**1.6**	mg/L	0.50	0.086	1	10/28/20 04:30	10/28/20 10:22	7727-37-9	
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Ormond Beach								
Nitrogen, NO2 plus NO3	**0.033 U**	mg/L	0.050	0.033	1		10/24/20 17:14		
365.1 Orthophosphate as P	Analytical Method: EPA 365.1 Pace Analytical Services - Ormond Beach								
Orthophosphate as P	**0.098**	mg/L	0.0040	0.0038	1		10/24/20 11:56		
365.4 Phosphorus, Total	Analytical Method: EPA 365.4 Preparation Method: EPA 365.4 Pace Analytical Services - Ormond Beach								
Phosphorus, Total (as P)	**0.12**	mg/L	0.10	0.050	1	10/28/20 04:30	10/28/20 10:22	7723-14-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587168

QC Batch: 676609
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587168001

METHOD BLANK: 3680655 Matrix: Water
Associated Lab Samples: 35587168001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.035 U	0.050	0.035	10/26/20 11:40	

LABORATORY CONTROL SAMPLE: 3680656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.1	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680658 3680657

Parameter	Units	35587159001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	0.059	1	1	1.1	1.1	99	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3680659 3680660

Parameter	Units	35587063004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	<0.035	1	1	1.0	1.1	101	107	90-110	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587168

QC Batch: 677110
QC Batch Method: EPA 351.2
Analysis Method: EPA 351.2
Analysis Description: 351.2 TKN
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587168001

METHOD BLANK: 3683308 Matrix: Water
Associated Lab Samples: 35587168001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.086 U	0.50	0.086	10/28/20 09:59	

LABORATORY CONTROL SAMPLE: 3683309

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	20	18.5	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3683311 3683310

Parameter	Units	35585619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	16.8	20	20	38.7	38.5	109	108	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3683996 3683995

Parameter	Units	35585886004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Kjeldahl, Total	mg/L	1.4	20	20	20.9	20.8	98	97	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587168

QC Batch: 676400
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587168001

METHOD BLANK: 3679876 Matrix: Water
Associated Lab Samples: 35587168001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	0.033 U	0.050	0.033	10/24/20 16:40	

LABORATORY CONTROL SAMPLE: 3679877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2	2.1	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679879 3679878

Parameter	Units	35586919004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.12	2	2	2.2	2.1	106	100	90-110	6	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679881 3679880

Parameter	Units	35587063008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	0.13	2	2	2.2	2.2	105	105	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587168

QC Batch: 676368
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Orthophosphate as P
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587168001

METHOD BLANK: 3679761 Matrix: Water
Associated Lab Samples: 35587168001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Orthophosphate as P	mg/L	0.0038 U	0.0040	0.0038	10/24/20 11:38	

LABORATORY CONTROL SAMPLE: 3679762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Orthophosphate as P	mg/L	0.1	0.094	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679764 3679763

Parameter	Units	35585574004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.0038 U	0.1	0.1	0.096	0.093	95	92	90-110	3	20	Q

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3679766 3679765

Parameter	Units	35587168001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Orthophosphate as P	mg/L	0.098	0.1	0.1	0.20	0.20	101	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA

Project: Miami River
Pace Project No.: 35587168

QC Batch: 677113
QC Batch Method: EPA 365.4
Analysis Method: EPA 365.4
Analysis Description: 365.4 Phosphorus
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35587168001

METHOD BLANK: 3683327 Matrix: Water
Associated Lab Samples: 35587168001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphorus, Total (as P)	mg/L	0.050 U	0.10	0.050	10/28/20 10:26	

LABORATORY CONTROL SAMPLE: 3683328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus, Total (as P)	mg/L	4	3.8	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3683330 3683329

Parameter	Units	35585619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphorus, Total (as P)	mg/L	0.28	4	4	4.2	4.2	99	98	80-120	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALIFIERS

Project: Miami River
Pace Project No.: 35587168

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

U	Compound was analyzed for but not detected.
Q	Sample held beyond the accepted holding time.

Pace Analytical Services, LLC
3610 Park Central Blvd N
Pompano Beach, FL 33064
(954)582-4300

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Miami River
Pace Project No.: 35587168

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35587168001	**MRSS1-8**	EPA 350.1	676609		
35587168001	**MRSS1-8**	EPA 351.2	677110	EPA 351.2	677260
35587168001	**MRSS1-8**	EPA 353.2	676400		
35587168001	**MRSS1-8**	EPA 365.1	676368		
35587168001	**MRSS1-8**	EPA 365.4	677113	EPA 365.4	677268

WO# : 35587168

35587168

Pace Analytical
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HAIN-OF-CUSTODY / Analytical Request Document

e Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Wood E&I
Address	5845 NW 158th Street
	Miami Lakes, FL 33014
Email:	ashok.aitharaju@woodplc.com
Phone: (954)695-6796	Fax:
Requested Due Date:	

Required Project Information:

Report To:	Ash Aitharaju
Copy To:	
Purchase Order #:	
Project Name:	Miami River
Project #:	

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	christina.raschke@pacelabs.com,
Pace Profile #:	5651

Regulatory Agency:

State / Location: FL

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Ammonia	Nitrate+Nitrite (NOx)	TKN	Total Phosphorus	Orthophosphate (PO4)	Residual Chlorine (Y/N)
1	MRSJ 1-8			10/23	1315				2	X	X							X	X	X	X	X		
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Adan Aguila/Wood	10/23	1505	PACE	10/23/	1505				
	PACE	10/23/	1505		10/23/20	1505				
		10/23/20	1810		10/23/20	1810	0.3			
		10/23	1400	SMK/PACE	10-23-20	23:30	4.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kelly McColl

SIGNATURE of SAMPLER: [signature] DATE Signed: 10/23/20

Pace Analytical Florida Laboratory	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 13	Document Revised: May 30, 2018 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt Form (SCUR)

WO#: 35587168
PM: CTR Due Date: 10/29/20
CLIENT: 36-MACTEC

Project #
Project Manager
Client:

Date and Initials of person:
Examining contents: SMK
Label:
Deliver:
pH:

Thermometer Used: T-349 Date: 10/23/20 Time: 23:45 Initials: S.C L

State of Origin: ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	4.7 **(Visual)**	@-0.1 **(Correction Factor)**	4.6 **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	_____ **(Visual)**	_____ **(Correction Factor)**	_____ **(Actual)**	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☑ Commercial ☐ Pace ☐ Other_____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority
☐ Other_____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # _____

Custody Seal on Cooler/Box Present: ☑ Yes ☐ No **Seals intact:** ☑ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Samples shorted to lab (If Yes, complete) Shorted Date:_____ Shorted Time:_____ Qty:_____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked. All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A ☑ Yes ☐ No ☐ N/A	Preservation Information: Preservative:_____ Lot #/Trace #:_____ Date:_____ Time:_____ Initials:_____
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted:_____ Date/Time:_____

Comments/ Resolution (use back for additional comments):_____

Project Manager Review:_____ Date:_____