MIAMI-DADE COUNTY
miamidade.gov

Water and Sewer
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Miami, Florida 33233-0316
T 305-665-7471

VIA ELECTRONIC CORRESPONDENCE

June 1, 2017

CCN: 61081
File No: 8.DC.52 & 77

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
RE: DOJ No. 90-5-1-1-4022/1
Tom.Mariani@usdoj.gov

Chief, Clean Water Enforcement Branch
Water Protection Division
Attn: Brad Ammons
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303
Ammons.Brad@epa.gov

Rachael Amy Kamons
Environmental Enforcement Section
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Rachael.Kamons@usdoj.gov

Florida Department of Environmental Protection
Southeast District – West Palm Beach
3301 Gun Club Road, MSC 7210-1
West Palm Beach, FL 33406
Attn: Compliance/Enforcement Section
Jason.Andreotta@dep.state.fl.us

RE: Consent Decree (Case: No. 1:12-cv-24400-FAM)
Reference DOJ Case No. 90-5-1-1-4022/1
Section XI, Paragraph 52 – Force Majeure
Section XVII, Paragraph 77 – Notices
Force Majeure Notification Letter for Consent Decree Appendix D-2, Capital Improvement Project 2.22 Master Pump Station No. 2

Dear Sir/Madam:

In accordance with the provisions of Section XI, Paragraph 52 of the above referenced Consent Decree (CD), Miami-Dade County (County) notified United States Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP), via email, on May 18, 2017 of a potential schedule delay in the Capital Improvement Project (CIP) 2.22 Central District Wastewater Treatment Plant (CDWWTP) Pump Station No. 2. The delay has occurred in the execution of this project when the contractor observed odors and a sheen on the groundwater during the start of excavation for the new foundation footings. Water and Sewer Department (WASD) has ceased underground work until a contamination assessment is performed on the site.

In accordance with Section XI, Paragraph 52, this notification letter shall further describe and explain the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; County's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; a statement as to whether, in the opinion of the County, such event may cause or contribute to an endangerment to public health, welfare or the environment, and documentation to support the force majeure claim.

Initial schedule challenges

In the course of setting up the process to address all of the Consent Decree projects, the County recognized the need to bring on additional staff to meet the aggressive schedules mandated by the Consent Decree. This was done by contracting with a professional consultant team of experts (led by AECOM) to assist the County in Program Management and oversite of multiple Design Services contracts. The process for hiring Engineering firms in the State of Florida is regulated under Florida Statute 287.055 "The Consultants Competitive Negotiation Act". As detailed in the First Status Report to the Court dated August 29, 2014, there was a lengthy delay in procuring the Program Management and Design Professional Firms. This resulted in a late start in the validation and design of several projects, specifically those with CD compliance dates ending 2016 through 2018, which includes this project. In addition, dates for downstream activities have been affected as is evident in the County's requests for modification of interim milestones. (Five requests submitted to EPA/FDEP in 2016 and four in 2017 to date.) Overlapping/expediting of interim activities planned to complete respective projects in accordance with the final CD milestone date has proven to be a challenge.

Explanation and description of the reasons for the delay

The scope of work for this Contract generally includes the following: replace the existing pump station effluent flowmeter with Owner furnished flowmeter, install a new Owner furnished flowmeter isolation valve, replace the existing odor control system with Owner furnished odor control system, replace the existing odor control system chemical storage and feed systems including emergency eye wash and shower and replace the dry-well ventilation system.

The contractor's initial activities associated with the odor control system were to demolish the existing structures at the north end of the pump station in preparation for construction of a new structure for the odor control system. The new structure required the contractor to demolish the existing 54-inch abandoned overflow pipe. At the start of excavation to remove the 54-inch pipe a "diesel" odor was detected and excavation was halted. The Contractor requested guidance and an alternative to removal was developed to fill the pipe with flowable fill and abandon in place. Per note 16 of the Miami Dade WASD Standards General Notes on sheet GC-1 (Attachment A), WASD Environmental Compliance was contacted and arrangements for sampling were made when the contractor resumed excavation activities for the foundation footings.

On Thursday, May 11, 2017, WASD Environmental Compliance collected water samples from the footing excavation. These samples were delivered to a 3rd party laboratory; Pace Analytical, for analysis. On May

16, 2017, the results of the testing were presented by WASD Environmental to the CD PMCM Construction Manager, Engineer and Contractor (Attachment B). The testing reveals contaminated groundwater.

Actions taken or to be taken to prevent or minimize the delay

The contractor was issued a Stop Work Order, limited to all work below grade and directed and engage the services of an environmental consultant that would develop a Work Action Plan for the contamination detected.

Anticipated duration of the delay

Until the contractor's environmental consultant has developed a scope of work and the Work Action Plan has been reviewed and approved, it is premature to forecast the anticipated duration of the delay. A follow-up letter will be provided once the mitigation action plan is developed with a schedule reflecting the plan's activities. It is WASD's intent to work closely with the contractor to identify mitigation efforts to reduce the schedule delay.

Schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay

WASD has taken or will take the following steps (in sequence) to prevent or mitigate delay or the effect of the delay:

1. Expedite contractor's environmental consultant's Work Action Plan reviewed and approved
2. Expedite review of the contractor revised project schedule
3. WASD, Engineer of Record (EOR) and PMCM will provide oversight during the implementation of the Work Action Plan to mitigate any further delays

Rationale for attributing such delay to a force majeure event

As defined in Section XI, Paragraph 51, "Force Majeure," is defined as any event arising from causes beyond the control of the County. The County did not foresee contamination at the construction site for CD CIP 2.22 CDWWTP Pump Station No. 2.

Cause or contribute to an endangerment to public health, welfare or the environment

Contamination of groundwater may cause or contribute to an endangerment to the public health, welfare or the environment. The Work Action Plan for the contamination detected will address this issue.

Should you have any questions regarding this matter, please call me at (786) 552-8894.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted

is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Maricela J. Fuentes

Maricela Fuentes, P.E., ENV SP
Assistant Director, Capital Projects

Attachments: **Attachment A** – Note 16 of the Miami Dade WASD Standards General Notes and
Attachment B – Pace Analytical Testing Results

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Southeast District – West Palm Beach
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Attn: Compliance/Enforcement Section
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Carlos Hernandez (RER-DERM)
Rashid Istambouli (RER-DERM)
David Wood (CD PMCM)
Andrea Suarez Abastida (CD PMCM)
Scott Eckler (CD PMCM)
Abby Diaz (CD PMCM)

Attachment A
Note 16 of the Miami Dade WASD Standards General Notes

CIVIL GENERAL NOTES:

GENERAL

1. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEBRIS FROM DEMOLITION AT CONTRACTORS EXPENSE.
2. ALL BUILDING COORDINATES ARE TO OUTSIDE CORNER OF COLUMN OR BUILDING.
3. THE CONTRACTOR SHALL DISPOSE OF ALL NON-ORGANIC WASTES SUCH AS OLD GUNITE, PIPING, ROCK RUBBLE ETC. AT AN APPROVED LANDFILL OR, OTHER SUITABLE DISPOSAL SITES AT THE CONTRACTOR'S EXPENSE.
4. ALL WORK WITHIN THE CITY OF MIAMI RIGHT OF WAY SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF MIAMI PUBLIC WORKS ENGINEERING STANDARDS. REFER TO www.miamigov.com/Public_works/ FOR A LINK TO CITY OF MIAMI PUBLIC WORKS ENGINEERING STANDARDS.
5. ALL WORK WITHIN THE BISCAYNE BOULEVARD RIGHT OF WAY SHALL CONFIRM TO FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARDS AND REQUIREMENTS. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS WITHIN THE FDOT PERMIT.
6. ALL WORK WHICH IMPACTS TRAFFIC OR REQUIRES LANE CLOSURE ON BISCAYNE BOULEVARD SHALL BE COMPLETED AT NIGHT BETWEEN THE HOURS OF 10:00 PM AND 5:00 AM. THE WORK ARE SHALL BE OPENED TO TRAFFIC WITH ALL LANES OPEN BETWEEN THE HOURS OF 5:00 AM AND 10:00 PM. THE CONTRACTOR SHALL HIRE A PROFESSIONAL ENGINEER TO DESIGN A SUPPORTING STRUCTURE WITH STEEL PLATES OR OTHER MEANS TO COVER OPEN TRENCHES THAT WILL WITHSTAND TRAFFIC H-20 LOADING TO ALLOW OPENING THE WORK AREA TO TRAFFIC. THE DESIGN SHALL MEET ALL FDOT AND CITY OF MIAMI REQUIREMENTS. THE CONTRACTOR SHALL SUBMIT PLANS FOR REVIEW AND APPROVAL TO REGULATORY AGENCIES AND THE OWNER AS PART OF THE MAINTENANCE OF TRAFFIC SUBMITTAL

UTILITIES

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN AND AROUND THE AREAS OF NEW CONSTRUCTION.
2. THE CONTRACTOR SHALL PROTECT ALL REMAINING EXISTING UTILITIES.
3. LOCATIONS OF UNDERGROUND UTILITIES WERE OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES WHETHER SHOWN OR NOT.
4. PRIOR TO ANY CONNECTIONS TO AN EXISTING UTILITY THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER.
5. PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES INCLUDING ALL WATER, SEWER, STORM DRAIN, GAS, PETROLEUM PRODUCTS OR OTHER PIPELINES, ALL BURIED ELECTRIC POWER COMMUNICATIONS OR TELEVISION CABLES, ALL TRAFFIC SIGNALS AND STREET LIGHTING AND ALL ROADWAY, STATE HIGHWAY AND RAILROADS RIGHT OF WAY, THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE AUTHORITIES REPRESENTING THE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITIES NOT LESS THAN 3 DAYS NOR MORE THAN 7 DAYS PRIOR TO EXCAVATION SO THAT A REPRESENTATIVE OR PAID OWNERS OR AGENCIES CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE. IN THE CASE OF THE UNDERGROUND UTILITY SERVICE ALERT CENTER, THIS NOTICE WILL COVER THEM TIME TO MARK THE LOCATION OF THE UTILITIES. THE CONTRACTOR SHALL ALSO NOTIFY THE REGIONAL OR LOCAL UNDERGROUND SERVICE ALERT COMPANY ATLEAST 3 DAYS BUT NOT MORE THAN 7 DAYS, PRIOR TO SUCH EXCAVATION.

PIPING

1. THE CONTRACTOR SHALL COMPLY WITH THE STATE DEPARTMENT OF HEALTH SERVICES CRITERIA FOR THE SEPARATION OF WATER MAINS AND SANITARY SEWERS.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 36 INCHES OF COVER ON ALL PIPELINES UNLESS OTHERWISE SHOWN OR DIRECTED.
3. STRAIGHT SLOPES SHALL BE MAINTAINED BETWEEN INVERT ELEVATIONS SHOWN OR SPECIFIED.
4. THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES, PULL BOXES AND MANHOLES TO FINISHED GRADE UNLESS OTHERWISE SHOWN OR SPECIFIED. MANHOLES IN OPEN FIELDS SHALL BE SET ONE FOOT ABOVE GRADE. APPROXIMATE RIM ELEVATIONS ARE SHOWN ON DRAWINGS.
5. THE CONTRACTOR SHALL PROVIDE TWO FLEXIBLE SLEEVE TYPE COUPLINGS WITH RESTRAINED JOINTS FOR EACH PIPE PENETRATING A STRUCTURE. THE COUPLINGS AND FLEXIBLE JOINTS SHALL BE 3-FEET AND 8-FEET AWAY FROM THE STRUCTURE. ALL PIPING SHALL BE RESTRAINED JOINT DESIGN UNLESS INDICATED OTHERWISE. COUPLINGS AND RESTRAINED JOINTS SHALL BE PROVIDED WHETHER SHOWN ON THE DRAWINGS OR NOT. COUPLINGS AND RESTRAINED JOINTS SHALL BE APPROVED BY THE ENGINEER. ALL RESTRAINED JOINTS SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS' RECOMMENDATIONS.

EROSION CONTROL

1. THE CONTRACTOR SHALL SUBMIT AN EROSION CONTROL PLAN FOR WORK DURING THE CONSTRUCTION, SIGNED AND STAMPED BY A REGISTERED FLORIDA ENGINEER PRIOR TO THE START OF CONSTRUCTION.
   a. ALL SLOPES SHALL BE PROTECTED FROM EROSION DURING ROUGH GRADING OPERATIONS AND THEREAFTER, UNTIL INSTALLATION OF FINAL GROUNDCOVER.
   b. ALL SLOPE PROTECTION SWALES SHALL BE CONSTRUCTED AT THE SAME TIME AS BANKS ARE GRADED.
   c. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF EROSION CONTROL MEASURES CONTAINED WITHIN THE CONTRACT SPECIFICATIONS OR AS REQUIRED BY THE CITY OF MIAMI OR ANY OTHER REGULATORY AUTHORITY. THE CONTRACTOR SHALL ALSO PROVIDE ANY ADDITIONAL EROSION CONTROL MEASURES (E.G. HYDROSEEDING, MULCHING OF STRAW, SAND BAGGING, DIVERSION DITCHES, ETC.) DICTATED BY FIELD CONDITIONS TO PREVENT EROSION OR THE INTRODUCTION OF DIRT, MUD, OR DEBRIS INTO EXISTING PUBLIC STREETS, WATERWAYS, OR ONTO ADJACENT PROPERTIES DURING ANY PHASE OF CONSTRUCTION OPERATIONS.

MIAMI DADE WASD STANDARDS GENERAL NOTES:

1. 48 HOURS PRIOR TO DIGGING, CONTRACTOR SHALL COORDINATE WITH ALL UNDERGROUND UTILITY SERVICE COMPANIES TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES. ADDITIONALLY, CONTRACTOR SHALL CALL "SUNSHINE STATE ONE CALL OF FLORIDA, INC." FOR LOCATION OF ALL UNDERGROUND UTILITIES (811).
   THESE UTILITY SERVICE COMPANIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
   1. MIAMI-DADE COUNTY PUBLIC WORKS
   2. MIAMI-DADE WATER AND SEWER DEPARTMENT
   3. BELL SOUTH
   4. NUI CITY GAS
   5. FLORIDA POWER & LIGHT (FPL)
   6. AT&T BROADBAND
   7. OTHERS AS REQUIRED
2. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER PROPERTY AND SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED DURING CONSTRUCTION AND SHALL REPAIR TO ITS ORIGINAL CONDITION SAID DAMAGES AT HIS EXPENSE ONLY.
3. LOCATION OF EXISTING FACILITIES AS SHOWN ON THE CONSTRUCTION DRAWINGS ARE FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE FACILITIES WHETHER SHOWN OR NOT SHOWN. CONTRACTOR IS TO FIELD VERIFY THE ELEVATION, TYPE OF PIPE AND LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION. IF AN EXISTING FACILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER/ENGINEER-OF-RECORD THROUGH THE ASSIGNED MDWASD CONSTRUCTION PROJECT MANAGER SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE SAID CONFLICT. PRIOR TO ANY CONNECTION TO AN EXISTING UTILITY, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER.
4. ELEVATIONS ARE REFERRED TO THE NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD). BEARINGS AND CORDS. VALUES ARE REFERRED TO PLANT COORDINATE SYSTEM.
5. EXISTING LAND SECTION CORNERS AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE MAINTAINED BY THE CONTRACTOR AND/OR RESET AFTER CONSTRUCTION UNDER CERTIFICATION BY A REGISTERED SURVEYOR.
6. PIPE ELEVATIONS SHOWN IN THE PROFILES ARE AT TOP OF PIPE UNLESS OTHERWISE INDICATED.
7. CAUTION SHALL BE EXERCISED AT ALL INTERSECTING UTILITIES. VERTICAL CLEARANCE BETWEEN SAID UTILITIES AND PROPOSED MAIN SHALL BE 6" MINIMUM UNLESS OTHERWISE NOTED. SEE MDWASD STANDARD DETAIL G.S. 1.50
8. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL SUPPLY THE ENGINEER OF RECORD WITH THE CERTIFICATION THAT ALL CONSTRUCTION AND MATERIALS MEET OR EXCEED THE CONTRACT DOCUMENTS AND HAVE BEEN INSTALLED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS.
9. ALL PAVEMENT MARKINGS REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR.
10. WHERE NEW PAVEMENT MEETS EXISTING, CONNECTION SHALL BE MADE IN A NEAT STRAIGHT LINE AND FLUSH WITH EXISTING PAVEMENT.
11. THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY CASTINGS, INCLUDING VALVE BOXES, JUNCTION BOXES, MANHOLES, HAND HOLES, PULL BOXES, INLETS AND SIMILAR STRUCTURES IN AREAS OF CONSTRUCTION. ALL ADJUSTMENTS TO BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY.
12. EXISTING TREES SHALL BE REMOVED ONLY IF REQUIRED FOR CONSTRUCTION. THOSE TREES NOT INTERFERING WITH CONSTRUCTION SHALL BE PROTECTED IN PLACE. THE CONTRACTOR IS ADVISED THAT A TREE PERMIT MAY BE REQUIRED FOR TREE REMOVAL. CONTRACTOR SHALL NOTIFY DERM PRIOR TO REMOVING ANY TREES.
13. THE CONTRACTOR SHALL REPLACE EXISTING FACILITIES (MANHOLES, STORM SEWER, CATCH BASINS, WATER SERVICES, ETC.) THAT ARE REMOVED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES. ANY AFFECTED FACILITIES SHALL BE REPLACED IN ACCORDANCE WITH STANDARDS OF THE JURISDICTIONAL AGENCY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES AND IMPROVEMENTS FROM DAMAGES, DISRUPTION OF SERVICE OR DESTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
15. REFER TO MDWASD STANDARD DETAIL GS 1.50 FOR VERTICAL AND HORIZONTAL CLEARANCES BETWEEN PROPOSED WATER MAINS AND OTHER EXISTING FACILITIES.
16. IF EVIDENCE OF POTENTIAL CONTAMINATION IS DETECTED DURING EXCAVATION, STOP EXCAVATION WORK AND NOTIFY MDWASD ENVIRONMENTAL COMPLIANCE AT (786)552-8400 AND THE CONSTRUCTION CONTRACTS
    1 MANAGEMENT DIVISION AT (786) 552-8829. EVIDENCE OF POTENTIAL CONTAMINATION MAY INCLUDE ANY OF THE FOLLOWING:
   A. ODOR
   B. SOLID WASTE DEBRIS
   C. SHEEN ON THE GROUNDWATER
   D. STAINED OR SATURATED SOIL (SOIL THAT CONTAINS PRODUCT THAT DRAINS WHEN IT IS HANDLED OR CREATES STREAKS ON EXCAVATION TOOLS) OR
   E. FREE FLOATING PRODUCT ON THE GROUNDWATER (OIL, DIESEL, GASOLINE, ETC.). MATERIAL THAT HAS ODOR, IS STAINED OR IS SATURATED MUST BE SEGREGATED ON AN IMPERMEABLE SURFACE FOR APPROPRIATE FUTURE DISPOSAL.
17. THE ENGINEER-OF-RECORD IS IN RESPONSIBLE CHARGE FOR THE DESIGN PART OF THIS PROJECT ONLY. THE DEPARTMENT, THROUGH THE CONSTRUCTION CONTRACTS MANAGEMENT DIVISION, WILL ASSIGN A FLORIDA LICENSED PROFESSIONAL ENGINEER TO TAKE RESPONSIBLE CHARGE OF INSPECTING THE CONSTRUCTION OF THIS PROJECT AND TO DETERMINE, IN GENERAL, IF THE CONSTRUCTION PROCEEDS IN COMPLIANCE WITH THE CONSTRUCTION PERMITS AND TO SUBMIT COMPLETE RECORD DRAWINGS AND CERTIFICATION OF CONSTRUCTION COMPLETION TO THE PERMITTING AGENCIES, AND TO OBTAIN WRITTEN APPROVAL OR CLEARANCE BEFORE PLACING THE NEWLY INSTALLED FACILITIES IN SERVICE
18. PAVEMENT RESTORATION TO BE DONE IN ACCORDANCE TO CITY OF MIAMI PUBLIC WORKS DEPARTMENT AND MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT REQUIREMENTS UNLESS OTHERWISE NOTED.
19. CONTRACTOR TO COMPLY WITH ALL PERMIT REQUIREMENTS INCLUDING FDEP & DERM FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).

THE FOLLOWING ARE REQUIREMENTS OF THE DEPARTMENT OF HEALTH

1. SEPARATION SHALL BE MEASURED FROM OUTSIDE EDGE TO OUTSIDE EDGE.
2. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND STORM SEWERS, STORMWATER FORCE MAINS, OR RECLAIMED WATER LINES, SHALL BE 3 FT. MINIMUM.
3. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND VACUUM TYPE SEWER PREFERABLY 10FT. , BUT 3 FT. MINIMUM.
4. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND GRAVITY OR PRESSURE SANITARY SEWERS, WASTEWATER FORCE MAINS OR RECLAIMED WATER MAINS PREFERABLY 10FT. BUT 6 FT. MINIMUM.
5. HORIZONTAL SEPARATION BETWEEN WATER MAINS AND GRAVITY SEWER ONLY MAY BE REDUCED TO 3 FT. WHERE BOTTOM OF WATER MAIN IS AT LEAST 6 INCHES ABOVE TOP OF SEWER.
6. HORIZONTAL SEPARATION OF WATER MAINS SHALL BE AT LEAST 10FT. TO ANY PART OF ON-SITE SEWER TREATMENT OR DISPOSAL SYSTEM
7. VERTICAL SEPARATIONS BETWEEN WATER MAINS AND GRAVITY SEWER, VACUUM TYPE SEWER OR STORM SEWERS, TO BE PREFERABLY 12 INCHES OR AT LEAST 6 INCHES ABOVE OR AT LEAST 12 INCHES BELOW
8. VERTICAL SEPARATIONS BETWEEN WATER MAINS AND PRESSURE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR RECLAIMED WATER, AT LEAST 12 INCHES ABOVE OR BELOW
9. CENTER 1-FULL LENGTH OF DIP WATER MAIN PIPE AT CROSSINGS; ALTERNATIVELY, ARRANGE PIPES SO JOINTS ARE AT LEAST 3 FEET FROM JOINTS IN VACUUM, STORM OR STORM FORCE MAINS, AT LEAST 6 FEET FROM JOINTS IN GRAVITY OR PRESSURE SEWERS, WASTEWATER FORCE MAINS OR RECLAIMED WATER.

   NOTE: IN ALL CASES, INCLUDING EXCEPTIONS, REFER TO F.A.C. 62-555.314

GENERAL PROJECT DESIGN NOTES

1. ALL WORK SHALL CONFORM TO FLORIDA BUILDING CODE (2014), FLORIDA FIRE PREVENTION CODE (2014), NFPA 101 (2009), AND ALL OTHER APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
   1
2. ALL WORK WILL CONFORM TO THE STANDARDS AND SPECIFICATIONS PUBLISHED FOR THIS PROJECT; IN ADDITION TO THOSE PUBLISHED BY RECOGNIZED PROFESSIONAL AND INDUSTRY ORGANIZATION, AS WELL AS THE MANUFACTURER.
3. THESE DRAWINGS WILL BE UTILIZED IN CONJUNCTION WITH THE PROJECT'S TECHNICAL SPECIFICATIONS AND SPECIFICATIONS PROVIDED BY RECOGNIZED PROFESSIONAL AND INDUSTRY ORGANIZATIONS, AS WELL AS THE MANUFACTURER.
4. REGARDING DISCREPANCIES OR CONFLICTS BETWEEN REQUIREMENTS PRESENTED WITHIN THESE DRAWINGS AND ANY APPLICABLE SPECIFICATION, THE MORE STRINGENT REQUIREMENTS MUST BE APPLIED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OF RECORD.
5. UTILITY LOCATIONS SHOWN ON THE PLANS, HORIZONTAL AND VERTICAL, WERE APPROXIMATED BASED ON AS-BUILT AND RECORD DRAWING DATA PROVIDED BY THE OWNER. IT SHALL BE NOTED THAT THESES LOCATIONS ARE APPROXIMATE. IN ADDITION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
6. BENCH MARK:
   A) N-685-R ELEVATION: 4.45' NGVD 1929.
      LOCATION: NE 11 TERR --- 131' SOUTH OF C/L
      US HWY #1 (BISCAYNE BLVD) --- 64' EAST OF C/L
      DESCRIPTION: PK NAIL AND ALUMINUM WASHER IN CONCRETE CATCH BASIN
   B) R-238 ELEVATION: 9.90' NGVD 1929
      LOCATION: NE 6 ST --- NW CORNER OF INTERSECTION
      US HWY #1 (BISC BLVD) --- 12.5' WEST OF WEST CURB
      ADDRESS #600 BISCAYNE BLVD --- 5' W OF NE COR OF "MIAMI NEWS"BLDG
      DESCRIPTION:S C & G BRASS DISC SET VERTICALLY IN NORTH FACE AND NEAR NE CORNER OF THE "MIAMI NEWS" BLDG.
7. ALL ELEVATIONS SHOWN ARE BASED ON NGVD29 DATUM.

REGULATORY AND ECONOMIC RESOURCES RER NOTES ON WATER-SEWER INSTALLATION

1. A PREFERRED HORIZONTAL DISTANCE (OUTSIDE TO OUTSIDE) OF 10 FEET OR MINIMUM OF 6 FEET SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE SEWER PIPES AND WATER MAINS. THE HORIZONTAL SEPARATION CAN BE REDUCED TO A MINIMUM OF 3 FEET ONLY FOR GRAVITY SEWER PIPES WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER. WHEN THE ABOVE SPECIFIED HORIZONTAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWED IF:

   -THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI.
   -THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE.
   -THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER PIPE.

2. A VERTICAL DISTANCE OF AT LEAST 12 INCHES (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN ANY WATER AND SEWER MAINS WITH SEWER PIPES PREFERABLY CROSSING UNDER WATER MAINS. THE MINIMUM VERTICAL SEPARATION CAN BE REDUCED TO 6 INCHES FOR GRAVITY SEWERS WHERE THE SEWER PIPE IS CROSSING BELOW THE WATER MAIN. THE CROSSING SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST 6 FEET FROM ALL JOINTS IN GRAVITY AND PRESSURE SEWER PIPES. WHEN THE ABOVE SPECIFIED VERTICAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWED IF:

   -THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI.
   -THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE.

3. THE CONTRACTOR SHALL VERIFY NATURE, DEPTH, AND CHARACTER OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
4. ALL OTHER PUBLIC OR PRIVATE UTILITY FACILITIES SHALL BE CONSTRUCTED AT LEAST 5 FEET FROM ANY WATER AND SEWER MAIN AS MEASURED FROM THE OUTSIDE BELL OF THE WATER OF THE UTILITY PIPE.
5. WHEN THE 5 FEET SEPARATION BETWEEN PROPOSED AND EXISTING LINE IS NOT POSSIBLE, THE CONTRACTOR SHALL HAND DIG OR EXPOSE THE WATER AND SEWER PIPES BEFORE PROCEEDING WITH POWER EQUIPMENT EXCAVATION.
6. IN NO CASE SHALL A CONTRACTOR INSTALL UTILITIES PIPES, CONDUITS, CABLES, ETC, IN THE SAME TRENCH PARALLEL AND ABOVE AN EXISTING WATER OR SEWER PIPE EXCEPT WHERE THEY CROSS ANY DEVIATION FROM NOTES 3, 4 AND 5 SHALL BE APPROVED IN WRITING BY THE RESPONSIBLE WATER AND SEWER UTILITY.
7. IN HIGHLY CONGESTED AREAS, WHERE EITHER WATER OR SEWER FACILITIES ARE EXISTING OR THE SEPARATION REQUIREMENTS CANNOT BE MET, SPECIAL CONSIDERATION MAY BE GIVEN SUBJECT TO SUBMITTAL OF DOCUMENTATION SHOWING THAT THE PROPOSED ALTERNATIVE WILL RESULT IN AN EQUIVALENT LEVEL OF RELIABILITY AND PUBLIC HEALTH PROTECTION.

GENERAL PROJECT DESIGN NOTES CONTINUED

8. GRAVITY SANITARY SEWERS CONSTRUCTED WITHIN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE PVC-900 OR DUCTILE IRON PIPE THE MAXIMUM ALLOWABLE EXFILTRATION, INFILTRATION, OR LEAKAGE FOR GRAVITY SANITARY SEWERS CONSTRUCTED WITHIN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE FIFTY (50) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY FOR RESIDENTIAL LAND USE AND TWENTY (20) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY FOR NON-RESIDENTIAL LAND USE WITH NOT ALLOWANCES FOR MANHOLES OR LATERALS. THE MAXIMUM ALLOWABLE EXFILTRATION, INFILTRATION, OR LEAKAGE FOR GRAVITY SANITARY SEWERS CONSTRUCTED WITHIN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE ONE HUNDRED (100) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY. THE DURATION OF ALL TESTS SHALL BE A MINIMUM OF TWO (2) HOURS. ANY OBSERVED LEAKS OR ANY OBVIOUSLY DEFECTIVE JOINTS OR PIPES SHALL BE REPLACED EVEN WHEN THE TOTAL LEAKAGE IS BELOW THAT ALLOWED.
9. FORCE MAIN SEWERS CONSTRUCTED IN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE EITHER DUCTILE IRON OR REINFORCED CONCRETE PRESSURE SEWER PIPES.
   -FOR DUCTILE IRON PIPE EXFILTRATION RATE SHALL NOT BE GREATER THAN THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AMERICAN WATER WORKS ASSOCIATION STANDARD (AWWAS) C600-82 AT A TEST PRESSURE OF 100 PSI.
   -FOR REINFORCED CONCRETE PRESSURE SANITARY SEWER EXFILTRATION RATE SHALL NOT BE GREATER THAN HALF (1/2) THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AWWAS C600-82 AT A TEST PRESSURE OF 100 PSI.
10. A NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AT EACH PUMP TO RECORD THE TOTAL NUMBER OF OPERATING HOURS OF THE STATION.

MIAMI-DADE WATER AND SEWER DEPARTMENT DESIGN AND CONSTRUCTION STANDARD DETAILS

TITLE	DETAIL No.	SHEET(S)
STANDARD REQUIREMENTS FOR WATER & SEWER CONSTRUCTION	GS 0.50	1 OF 2
AS-BUILT REQUIREMENTS	GS 0.50	2 OF 2
WATER AND SEWER MAIN CROSSINGS	GS 1.50	1 OF 1
TYPICAL TAPPING VALVE SETTING (16" AND SMALLER)	GS 1.70	1 OF 1
TAPPING SLEEVE AND VALVE INSTALLATION	GS 1.80	1 OF 1
TYPICAL TRENCH BACKFILL FOR DI WATER AND FORCE MAINS	GS 1.90	1 OF 1
STANDARD REQUIREMENTS FOR WATER & SEWER MECHANICAL THRUST RESTRAINT	GS 2.00	1 OF 5
THRUST RESTRAINT DESIGN DUCTILE IRON/PVC PIPE (VERTICAL OFFSET)	GS 2.00	2 OF 5
THRUST RESTRAINT DESIGN DUCTILE IRON/PVC PIPE (TEE AND TAPPING SLEEVE)	GS 2.00	3 OF 5
THRUST RESTRAINT DESIGN DUCTILE IRON/PVC PIPE (DEAD ENDS)	GS 2.00	4 OF 5
THRUST RESTRAINT DESIGN DUCTILE IRON/PVC PIPE (HORIZONTAL BENDS)	GS 2.00	5 OF 5
STANDARD SYMBOLS	GS 3.00	1 OF 2
STANDARD SYMBOLS	GS 3.00	2 OF 2
TYPICAL GATE VALVE SETTING (SMALLER THAN 16")	WS 1.00	1 OF 1
AIR RELEASE VALVE	WS 1.60	1 OF 1
CASTING STANDARDS	WS 2.05	1 OF 1
TYPICAL 1" SERVICE CONNECTION (COPPER OR HDPE)	WS 2.16	3 OF 4
TYPICAL 2" SERVICE CONNECTION (HDPE)	WS 2.16	4 OF 4
NO 2 CI VALVE BOX AND LID	WS 3.10	1 OF 1
NO 3 CI VALVE BOX	WS 3.11	1 OF 2
NO 3 CI LID	WS 3.11	2 OF 2
TYPICAL MJ BUTTERFLY VALVE (24" AND SMALLER)	WS 3.12	1 OF 1
APPROVED BACKFLOW PREVENTION ASSEMBLIES - NOTES	WS 4.18	4 OF 4
TYPICAL FIRE AND FIRE & DOMESTIC WATER SERVICE CONNECTIONS	WS 4.20	1 OF 4
PIPE IDENTIFICATION	R 4.00	1 OF 1
LOCATING DEVICES FOR NON-METALLIC PIPE	R 5.0	1 OF 1
NO 53 CI VALVE BOX AND LID	SS 13.00	1 OF 1
TYPICAL TRENCH CONSTRUCTION - FOR VC AND DI GRAVITY SEWER	SS 18.00	1 OF 3
TYPICAL PLUG VALVE INSTALLATION	SS 19.10	1 OF 1
SANITARY SEWER CLEANOUT LID	SS 22.0	1 OF 2
SANITARY SEWER CLEANOUT CONCRETE BOX DETAIL	SS 22.0	2 OF 2
PAVEMENT RESTORATION TYPE "M"	A 4.00	1 OF 1
ABBREVIATIONS FOR DEPARTMENT'S PROJECTS	A 10.0	1, 2 & 3 OF 3

THESE DETAILS FORM AN INTERGRAL PART OF THE CONSTRUCTION DOCUMENTS

THESE DETAILS ARE AVAILABLE AT www.miamidade.gov/wasd/design-construction-standard.asp

QUALITY. VALUE. ECONOMIC GROWTH.
WWW.MIAMIDADE.GOV/WATER

MWH
2600 S Douglas Rd,
SUITE 600
Miami, FL 33134
Certificate of Authorization #6773

MIAMI DADE WASD PUMP STATION NO 2
1075 BISCAYNE BLVD - MIAMI, FLORIDA 33132
CD 2.22 PUMP STATION 2
REHABILITATION UPGRADES

GENERAL CIVIL NOTES

DRAWING ISSUED

REVISION No.	DESCRIPTION	DATE	BY
A	DD	1/2016	BWL
B	100% NFC	3/2016	AT
C	100% PERMIT	4/2016	AT
1	ADDENDUM #1	9/2016	BWL

APPROVED

PROJ No.: 10507783

DESIGNED: BWL | CHECKED: IA

DRAWN: BA | FINAL CHECK: IA

Brian LaMay, P.E.
State of Florida–License No. 60142
Date:_____

ER No: S049346 | PCTS No: 13162

FILE NAME: T0342_GC-1

DATE: APRIL 2016 | SCALE: NO SCALE

SHEET GC-1

Attachment B
Pace Analytical Testing Results

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

May 12, 2017

Jose R. Tovar
Miami Dade Water & Sewer
6800 SW 87th Avenue
Miami, FL 33173

RE: Project: Testing
Pace Project No.: 35311473

Dear Jose Tovar:
Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Rossy Guima
rossy.guima@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: Testing
Pace Project No.: 35311473

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
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
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
Nevada Certification: FL NELAC Reciprocity
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
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
Wyoming Certification: FL NELAC Reciprocity
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: Testing
Pace Project No.: 35311473

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35311473001	**Open Excavation**	Water	05/11/17 13:45	05/11/17 14:45

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

SAMPLE ANALYTE COUNT

Project: Testing
Pace Project No.: 35311473

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35311473001	**Open Excavation**	FL-PRO	JGW	3	PASI-O
		EPA 8270 by SIM	TWB	20	PASI-O
		EPA 8260	SK1	10	PASI-O

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

ANALYTICAL RESULTS

Project: Testing
Pace Project No.: 35311473

Sample: Open Excavation **Lab ID: 35311473001** Collected: 05/11/17 13:45 Received: 05/11/17 14:45 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
FL-PRO Water, Low Volume	Analytical Method: FL-PRO Preparation Method: EPA 3510								
Petroleum Range Organics	**12.8**	mg/L	1.0	0.80	1	05/12/17 04:29	05/12/17 10:43		
Surrogates									
o-Terphenyl (S)	79	%	82-142		1	05/12/17 04:29	05/12/17 10:43	84-15-1	J(S0)
N-Pentatriacontane (S)	63	%	42-159		1	05/12/17 04:29	05/12/17 10:43	630-07-09	
8270 MSSV PAHLV by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3510								
Acenaphthene	**0.025 U**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	83-32-9	
Acenaphthylene	**0.025 U**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	208-96-8	
Anthracene	**0.24 I**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	120-12-7	
Benzo(a)anthracene	**1.3**	ug/L	0.10	0.025	1	05/12/17 03:00	05/12/17 09:52	56-55-3	
Benzo(a)pyrene	**1.8**	ug/L	0.10	0.025	1	05/12/17 03:00	05/12/17 09:52	50-32-8	
Benzo(b)fluoranthene	**2.4**	ug/L	0.10	0.025	1	05/12/17 03:00	05/12/17 09:52	205-99-2	
Benzo(g,h,i)perylene	**1.4**	ug/L	0.50	0.028	1	05/12/17 03:00	05/12/17 09:52	191-24-2	
Benzo(k)fluoranthene	**0.60**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	207-08-9	
Chrysene	**0.96**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	218-01-9	
Dibenz(a,h)anthracene	**0.034 U**	ug/L	0.10	0.034	1	05/12/17 03:00	05/12/17 09:52	53-70-3	
Fluoranthene	**1.3**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	206-44-0	
Fluorene	**0.025 U**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.97**	ug/L	0.10	0.029	1	05/12/17 03:00	05/12/17 09:52	193-39-5	
1-Methylnaphthalene	**1.0 U**	ug/L	2.0	1.0	1	05/12/17 03:00	05/12/17 09:52	90-12-0	
2-Methylnaphthalene	**1.0 U**	ug/L	2.0	1.0	1	05/12/17 03:00	05/12/17 09:52	91-57-6	
Naphthalene	**1.0 U**	ug/L	2.0	1.0	1	05/12/17 03:00	05/12/17 09:52	91-20-3	
Phenanthrene	**0.25 I**	ug/L	0.50	0.050	1	05/12/17 03:00	05/12/17 09:52	85-01-8	
Pyrene	**2.0**	ug/L	0.50	0.025	1	05/12/17 03:00	05/12/17 09:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	33-101		1	05/12/17 03:00	05/12/17 09:52	321-60-8	
Terphenyl-d14 (S)	65	%	38-115		1	05/12/17 03:00	05/12/17 09:52	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**0.10 U**	ug/L	1.0	0.10	1		05/12/17 07:33	71-43-2	
Ethylbenzene	**0.50 U**	ug/L	1.0	0.50	1		05/12/17 07:33	100-41-4	
Methyl-tert-butyl ether	**0.50 U**	ug/L	1.0	0.50	1		05/12/17 07:33	1634-04-4	
Toluene	**0.50 U**	ug/L	1.0	0.50	1		05/12/17 07:33	108-88-3	
Xylene (Total)	**1.5 U**	ug/L	3.0	1.5	1		05/12/17 07:33	1330-20-7	
m&p-Xylene	**1.0 U**	ug/L	2.0	1.0	1		05/12/17 07:33	179601-23-1	
o-Xylene	**0.50 U**	ug/L	1.0	0.50	1		05/12/17 07:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	89-111		1		05/12/17 07:33	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	75-135		1		05/12/17 07:33	17060-07-0	
Toluene-d8 (S)	100	%	89-112		1		05/12/17 07:33	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: Testing
Pace Project No.: 35311473

QC Batch: 368100
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Associated Lab Samples: 35311473001

METHOD BLANK: 1987225
Matrix: Water
Associated Lab Samples: 35311473001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	0.10 U	1.0	0.10	05/12/17 00:01	
Ethylbenzene	ug/L	0.50 U	1.0	0.50	05/12/17 00:01	
m&p-Xylene	ug/L	1.0 U	2.0	1.0	05/12/17 00:01	
Methyl-tert-butyl ether	ug/L	0.50 U	1.0	0.50	05/12/17 00:01	
o-Xylene	ug/L	0.50 U	1.0	0.50	05/12/17 00:01	
Toluene	ug/L	0.50 U	1.0	0.50	05/12/17 00:01	
Xylene (Total)	ug/L	1.5 U	3.0	1.5	05/12/17 00:01	
1,2-Dichloroethane-d4 (S)	%	101	75-135		05/12/17 00:01	
4-Bromofluorobenzene (S)	%	96	89-111		05/12/17 00:01	
Toluene-d8 (S)	%	99	89-112		05/12/17 00:01	

LABORATORY CONTROL SAMPLE: 1987226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.7	93	70-130	
Ethylbenzene	ug/L	20	19.3	96	70-130	
m&p-Xylene	ug/L	40	38.5	96	70-130	
Methyl-tert-butyl ether	ug/L	20	20.0	100	64-133	
o-Xylene	ug/L	20	19.0	95	70-130	
Toluene	ug/L	20	18.6	93	70-130	
Xylene (Total)	ug/L	60	57.4	96	70-130	
1,2-Dichloroethane-d4 (S)	%			103	75-135	
4-Bromofluorobenzene (S)	%			99	89-111	
Toluene-d8 (S)	%			101	89-112	

MATRIX SPIKE SAMPLE: 1987777

Parameter	Units	35311198005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	3.5	20	22.4	94	70-130	
Ethylbenzene	ug/L	0.98 I	20	20.0	95	70-130	
m&p-Xylene	ug/L	4.9	40	41.9	92	70-130	
Methyl-tert-butyl ether	ug/L	0.50 U	20	17.6	88	64-133	
o-Xylene	ug/L	0.50 U	20	18.2	89	70-130	
Toluene	ug/L	0.50 U	20	18.3	91	70-130	
Xylene (Total)	ug/L	4.9	60	60.1	92	70-130	
1,2-Dichloroethane-d4 (S)	%				103	75-135	
4-Bromofluorobenzene (S)	%				97	89-111	
Toluene-d8 (S)	%				99	89-112	

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: Testing
Pace Project No.: 35311473

SAMPLE DUPLICATE: 1987776

Parameter	Units	35311198004 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	0.10 U	0.10 U		40	
Ethylbenzene	ug/L	0.50 U	0.50 U		40	
m&p-Xylene	ug/L	1.0 U	1.0 U		40	
Methyl-tert-butyl ether	ug/L	0.50 U	0.50 U		40	
o-Xylene	ug/L	0.50 U	0.50 U		40	
Toluene	ug/L	0.50 U	0.50 U		40	
Xylene (Total)	ug/L	1.5 U	1.5 U		40	
1,2-Dichloroethane-d4 (S)	%	100	100	1	40	
4-Bromofluorobenzene (S)	%	97	99	3	40	
Toluene-d8 (S)	%	101	101	0	40	

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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: Testing
Pace Project No.: 35311473

QC Batch: 368079
QC Batch Method: EPA 3510
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270 Water PAHLV by SIM MSSV
Associated Lab Samples: 35311473001

METHOD BLANK: 1987046
Matrix: Water
Associated Lab Samples: 35311473001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	1.0 U	2.0	1.0	05/12/17 07:47	
2-Methylnaphthalene	ug/L	1.0 U	2.0	1.0	05/12/17 07:47	
Acenaphthene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Acenaphthylene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Anthracene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Benzo(a)anthracene	ug/L	0.025 U	0.10	0.025	05/12/17 07:47	
Benzo(a)pyrene	ug/L	0.025 U	0.10	0.025	05/12/17 07:47	
Benzo(b)fluoranthene	ug/L	0.025 U	0.10	0.025	05/12/17 07:47	
Benzo(g,h,i)perylene	ug/L	0.028 U	0.50	0.028	05/12/17 07:47	
Benzo(k)fluoranthene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Chrysene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Dibenz(a,h)anthracene	ug/L	0.034 U	0.10	0.034	05/12/17 07:47	
Fluoranthene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Fluorene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
Indeno(1,2,3-cd)pyrene	ug/L	0.029 U	0.10	0.029	05/12/17 07:47	
Naphthalene	ug/L	1.0 U	2.0	1.0	05/12/17 07:47	
Phenanthrene	ug/L	0.050 U	0.50	0.050	05/12/17 07:47	
Pyrene	ug/L	0.025 U	0.50	0.025	05/12/17 07:47	
2-Fluorobiphenyl (S)	%	59	33-101		05/12/17 07:47	
Terphenyl-d14 (S)	%	66	38-115		05/12/17 07:47	

LABORATORY CONTROL SAMPLE: 1987047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	5	3.3	66	33-118	
2-Methylnaphthalene	ug/L	5	3.0	59	34-104	
Acenaphthene	ug/L	5	3.8	76	38-109	
Acenaphthylene	ug/L	5	2.6	51	31-115	
Anthracene	ug/L	5	2.5	50	38-111	
Benzo(a)anthracene	ug/L	5	3.0	59	36-110	
Benzo(a)pyrene	ug/L	5	2.1	42	27-107	
Benzo(b)fluoranthene	ug/L	5	3.1	63	32-119	
Benzo(g,h,i)perylene	ug/L	5	1.9	37	10-109	
Benzo(k)fluoranthene	ug/L	5	3.0	60	28-118	
Chrysene	ug/L	5	3.8	75	33-130	
Dibenz(a,h)anthracene	ug/L	5	1.6	31	10-104	
Fluoranthene	ug/L	5	2.8	57	45-115	
Fluorene	ug/L	5	3.7	75	41-114	
Indeno(1,2,3-cd)pyrene	ug/L	5	1.8	35	10-104	
Naphthalene	ug/L	5	2.9	59	38-100	

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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: Testing
Pace Project No.: 35311473

LABORATORY CONTROL SAMPLE: 1987047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/L	5	3.4	68	41-106	
Pyrene	ug/L	5	2.9	59	45-115	
2-Fluorobiphenyl (S)	%			66	33-101	
Terphenyl-d14 (S)	%			82	38-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987266 1987267

Parameter	Units	35311303001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	1.1 I	5	5	4.1	3.8	61	55	33-118	7	40	
2-Methylnaphthalene	ug/L	1.0 U	5	5	3.9	3.6	60	54	34-104	8	40	
Acenaphthene	ug/L	0.22 I	5	5	3.7	3.6	70	67	38-109	5	40	
Acenaphthylene	ug/L	0.025 U	5	5	2.7	2.6	55	52	31-115	5	40	
Anthracene	ug/L	0.025 U	5	5	2.6	2.6	53	52	38-111	1	40	
Benzo(a)anthracene	ug/L	0.025 U	5	5	3.0	2.8	60	56	36-110	6	40	
Benzo(a)pyrene	ug/L	0.025 U	5	5	1.8	1.7	36	35	27-107	5	40	
Benzo(b)fluoranthene	ug/L	0.025 U	5	5	2.6	2.5	53	49	32-119	7	40	
Benzo(g,h,i)perylene	ug/L	0.028 U	5	5	1.8	1.6	36	32	10-109	10	40	
Benzo(k)fluoranthene	ug/L	0.025 U	5	5	2.1	2.3	42	45	28-118	7	40	
Chrysene	ug/L	0.025 U	5	5	3.0	3.0	60	60	33-130	0	40	
Dibenz(a,h)anthracene	ug/L	0.034 U	5	5	1.1	0.93	22	19	10-104	18	40	
Fluoranthene	ug/L	0.028 I	5	5	2.9	2.6	57	52	45-115	8	40	
Fluorene	ug/L	0.025 U	5	5	3.5	3.4	71	68	41-114	3	40	
Indeno(1,2,3-cd)pyrene	ug/L	0.029 U	5	5	1.4	1.2	28	24	10-104	16	40	
Naphthalene	ug/L	5.2	5	5	8.0	7.3	56	41	38-100	10	40	
Phenanthrene	ug/L	0.050 U	5	5	3.2	3.1	63	62	41-106	2	40	
Pyrene	ug/L	0.025 U	5	5	3.0	2.6	59	53	45-115	11	40	
2-Fluorobiphenyl (S)	%						61	58	33-101			
Terphenyl-d14 (S)	%						58	50	38-115			

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: Testing
Pace Project No.: 35311473

QC Batch: 368014
QC Batch Method: EPA 3510
Analysis Method: FL-PRO
Analysis Description: FL-PRO Water Low Volume
Associated Lab Samples: 35311473001

METHOD BLANK: 1986156 Matrix: Water
Associated Lab Samples: 35311473001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Petroleum Range Organics	mg/L	0.80 U	1.0	0.80	05/12/17 10:37	
N-Pentatriacontane (S)	%	98	42-159		05/12/17 10:37	
o-Terphenyl (S)	%	110	82-142		05/12/17 10:37	

LABORATORY CONTROL SAMPLE: 1986157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Petroleum Range Organics	mg/L	5	3.1	62	55-118	
N-Pentatriacontane (S)	%			53	42-159	
o-Terphenyl (S)	%			77	82-142	J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987271 1987272

Parameter	Units	35311303001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Petroleum Range Organics	mg/L				3.6	3.6				2	20	
N-Pentatriacontane (S)	%						97	68	42-159			
o-Terphenyl (S)	%						80	88	82-142			J(S0)

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: Testing
Pace Project No.: 35311473

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.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

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.

LABORATORIES

PASI-O	Pace Analytical Services - Ormond Beach

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(S0)	Estimated Value. Surrogate recovery outside laboratory control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Testing
Pace Project No.: 35311473

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35311473001	**Open Excavation**	EPA 3510	368014	FL-PRO	368157
35311473001	**Open Excavation**	EPA 3510	368079	EPA 8270 by SIM	368127
35311473001	**Open Excavation**	EPA 8260	368100		

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WO# : 35311473

35311473

ECORD

te:_____ Page 1 of 1

Company Name: Dade County WASD PO#

Address: 6800 SW 87 Ave

City: State: Zip:

Attn: Jose Tovar Fax#

email: Tovj@miamidade.gov Phone: 786 402-7603

Project Name Proj #

Sampler Signature

Circle One Event: Daily Weekly Monthly Quartely Semi-Annual Annual N/A

LAB ANALYSIS

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code*	Field Filtered	Integrity OK(Y/N)	Total # of containers	Parameters: BTEX/MTBE	FL PRO	RAH 8270 SIM								EXAMPLE Diss. Lead 6010
								# of Containers Size/Type										1 16ozP
1	BTEX/MTBE	5-11-17	1:45				5	3 40mL	1 1L amb	1 250mL								
2	FL PRO open excavation						4	1 100mL										
3	RAH						4	1 1L amb										
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Container Type Codes

AV	Amber Vial	ES	Encore Sampler
CV	Clear Vial	PPV	Prepreserved vial
P	Plastic	PL C	Plastic container
AL	Amber Liter	PL J	Plastic Jar
CL	Clear Liter	Z	Ziploc bag
AP	Amber Plastic	TB	Tedlar bag
AG	Amber Glass	WP	Whirl pak
SJ	Soil Jar	G	Gallon Jug
Other_____		TC	Terra-core

PPV Prepreserved vial
Size(s): 2oz, 4oz, 8oz, 16oz, 32oz or 1L, other_____
40ml 500ml 250ml 125 ml
Example: 4ozP = 4oz Plastic, 8ozSJ= 8oz Soil Jar

Matrix Codes

SD	Solid Waste	OL	Oil
GW	Ground Water	SL	Sludge
EFF	Effluent	SO	Soil Sediment
AFW	Analyte Free H20	AQ	Aqueous
WW	Waste Water	NA	Nonaqueous
DW	Drinking Water	PE	Petroleum
SW	Surface Water	O	Other_____ (Please specify)
ML	Misc. Liquid		

Preservative Type Codes

A. None	E. HCL	I. Ice
B. HNO_3	F. MeOH	J. MCAA
C. H_2SO_4	G. $Na_2S_2O_3$	K. Zn Acetate
D. NaOH	H. $NaHSO_4$	O. Other

REMARKS

24 hr

Rush

Circle T.A.T. REQUEST (Rush Fees Approved)
Standard: Y N
RUSH: Today 1D 2D 3D 4D 5D ___

Short Hold: Y_____ N_____

Circle QA/QC Report Level: 1 2 3 4 CLP AFCEE QAPP Other_____

EDD (Fees May Apply): ADaPT SEDD ERPIMS TSV CSV Other _____

COC Condition: OK Incomplete

Required State Certification: FL GA SC NC NJ PA LA TX IL ___

Coolers #'s - Temp °C: 1 ___ 2 ___ 3 ___ 4 ___ 5 ___

Item	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1			5/11/17	1445		PACE	5/11/17	1445
2		PACE	5/11/17				5/11/17	16
3			5/11/17	1835		RAH	5/11/17	1825
4								

Lab Use Only	YES	NO	N/A
Non-Conformance Found?			
Samples INTACT upon arrival?			
Received on Wet Ice?			
Proper Preservatives Indicated?			
Received within holding time?			
Custody seals Intact?			
Volatiles rec'd without headspace?			
Proper Containers Used?			

C.O.C. Serial # 87665

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: August 10, 2016
	Document No:	Issuing Authority: Pace Florida Quality Office

[redacted] WO#: 35311473 [redacted]

PM: RYG Due Date: 05/12/17

CLIENT: 36-MDWSD

Proje
Project Mana
Clie

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

Thermometer Used: T-315 Date: 5/11/17 Time: Initials:

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

Cooler #1 Temp.°C 1.6 (Visual) -0.1 (Correction Factor) 1.5 (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 ☐ Other
Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Unknown

Tracking #

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

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

		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: