

## SCS ENGINEERS

# TRANSMITTAL

**Attn:** Mr. Wilbur Mayorga  
**Organization:** Department of Regulatory and Economic Resources  
Environmental Resources Management

**Date:** 6/10/2015  
**From:** Brittney Odom

**Address:** 701 NW 1<sup>st</sup> Court, 4<sup>th</sup> Floor  
Miami, Florida 33136-3912

**Phone:**

**Sent via:** FedEx  
**Tracking No:** N/A  
**Project No:** 09213010.44

**Re:** Douglas Park – Groundwater Assessment Report

Please find enclosed the following items:

Copies	Dated	Description
1	6-9-2015	Groundwater Assessment Report (one paper, one CD)

These are transmitted:

- For approval  
 For review and comment  
 For your use
- Approved as submitted  
 Approved as noted  
 Returned for corrections
- Other:

Remarks:

Received by: \_\_\_\_\_

Distribution:

*If enclosures are not as indicated, please notify us immediately.*

## SCS ENGINEERS

June 9, 2015  
File No. 09213010.44

Mr. Wilbur Mayorga, P.E., Chief  
Department of Regulatory and Economic Resources  
Division of Environmental Resources Management  
701 Northwest 1<sup>st</sup> Court, 4<sup>th</sup> Floor  
Miami, Florida 33136

**Re: Douglas Park (HWR-773)**  
**2795 SW 37<sup>th</sup> Avenue**  
**Miami, Florida**

**Subject: Groundwater Assessment Report**

Dear Mr. Mayorga:

SCS Engineers (SCS), on behalf of the City of Miami (the City), submits this Groundwater Assessment Report for the above referenced site (the Site) to the Department of Regulatory and Economic Resources, Division of Environmental Resource Management (DERM). A site map is provided as **Figure 1**. This report addresses comment #3 of the DERM letter dated August 5, 2014 (**Attachment 1**). This report provides a summary of groundwater sampling and well installation activities.

## GROUNDWATER QUALITY ASSESSMENT

### GROUNDWATER ELEVATION

On May 12, 2015, SCS recorded depth-to-water (DTW) measurements from monitoring wells MW-1 through MW-5 to determine groundwater elevation. The elevations were used to calculate the groundwater flow direction, interpreted towards the south-southwest with a horizontal hydraulic gradient of 0.002 feet per foot.

Monitoring well construction details, top-of-casing (TOC) elevation data and depth to water measurements are summarized in **Table 1**. Groundwater elevations and the interpreted groundwater flow direction are provided in **Figure 2**.

### GROUNDWATER SAMPLING

In response to the DERM letter dated August 5, 2014, URS resampled MW-2 and submitted the report "Monitoring well MW-2 resampling results", dated March 25, 2015. Based on the results of the URS report, SCS installed two additional wells (MW-4 and MW-5) located in the southwest region of the Site for delineation (refer to **Attachment 2** for copies of the monitoring



well construction and development logs and soil boring logs and **Attachment 3** for the Investigation Derived Waste Disposal Manifest).

On April 6, 2015, SCS collected groundwater samples from monitoring wells MW-4 and MW-5 (refer to **Attachment 4** for copies of the groundwater sampling and calibration logs). Field activities were conducted in accordance with the FDEP Quality Assurance Rule 62-160, FAC. Samples were submitted to Pace Analytical, Inc., a NELAP- accredited laboratory for the analysis of Iron via EPA Method 6010.

## ANALYTICAL RESULTS

A summary of groundwater analytical results is provided in **Table 2** and depicted on **Figure 3**. Laboratory analytical reports and chain-of-custody records are provided in **Attachment 5**. Analytical results were compared to groundwater cleanup target levels (GCTLs) promulgated in Chapter 62-780, FAC.

Concentrations of Iron were reported above the Miami-Dade Background Concentration of Iron in Groundwater in monitoring wells MW-2, MW-4, and MW-5.

## CONCLUSIONS AND RECOMMENDATIONS

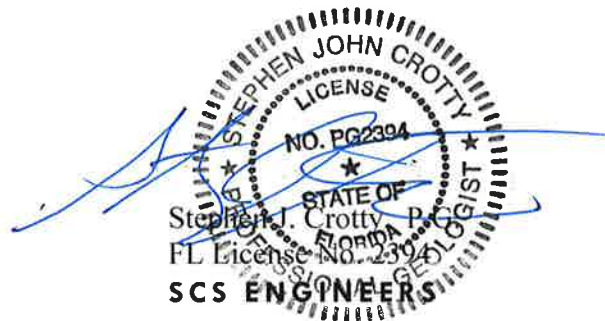
Based on the results of this assessment, SCS recommends additional assessment of monitoring wells MW-2, MW-4, and MW-5 for Iron.

Please contact the undersigned with any questions or comments.

Respectfully Submitted,



Brittney Odom  
Project Professional  
**SCS ENGINEERS**



Enclosures

**Figure 1** – Site Plan

**Figure 2** – Groundwater Elevation Map

**Figure 3** – Groundwater Analytical Summary Map

**Table 1** – Monitoring Well Construction Details

**Table 2** – Groundwater Analytical Summary

**Attachment 1** – Regulatory Correspondence

**Attachment 2** – Monitoring Well Construction and Development Logs and Soil Boring Logs

**Attachment 3** - Investigation Derived Waste Disposal Manifest

**Attachment 4** – Groundwater Sampling and Calibration Logs

**Attachment 5** – Laboratory Analytical Reports, Sample Chain of Custody

## FIGURES

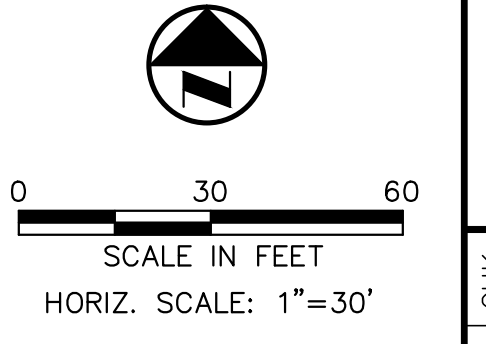
M:\ESMASTER\City of Miami\Douglas Park\DWG\Groundwater Monitoring\Figure 1 - Site Plan.dwg Jun 04, 2015 - 5:38pm Layout Name: Site Plan By: 3617oop

SW 37th Avenue - Douglas Road



SW 28th Street

ENGLISH CENTER



**LEGEND**

WELL LOCATION

REV	DATE	DESCRIPTION	CHK. BY
<<	<<	<<	<<
<<	<<	<<	<<
<<	<<	<<	<<
<<	<<	<<	<<

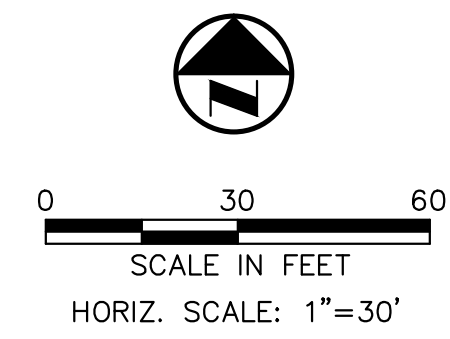
SHEET TITLE	<b>SITE PLAN</b>
PROJECT TITLE	<b>CITY OF MIAMI DOUGLAS PARK</b>

CLIENT		<b>CITY OF MIAMI</b>	
<b>SCS ENGINEERS</b> STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. 7700 N. KENDALL DRIVE, SUITE 607, MIA, MI, FL 33156 PH. (305) 412-8188 FAX. (305) 412-8105 FL CERTIFICATE OF AUTHORIZATION NO. 00004892			
DES. BY:	CMR	CHK. BY:	EES
DWN. BY:	CMR	APP. BY:	JPT
DATE:	MAY 2015	SCALE:	AS SHOWN
CADD FILE:		DRAWING NO.	

DATE:		MAY 2015
SCALE:		AS SHOWN
DRAWING NO.		<b>Fig. 1</b>

Jeffery P. Thompson, P.E.  
FL LICENSE NO. 69239

M:\ESMASTER\City of Miami\Douglas Park\DWG\Groundwater Monitoring\Figure 2 - Contour Map.dwg May 28, 2015 - 5:06pm Layout Name: GW Contour By: 3617aop



**LEGEND**

- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR, IN FEET NGVD
- GROUNDWATER FLOW DIRECTION

<p><b>CLIENT</b></p> <p><b>CITY OF MIAMI</b></p>	<p><b>SHEET TITLE</b></p> <p><b>GROUNDWATER CONTOUR MAP</b></p>	<p><b>PROJECT TITLE</b></p> <p><b>CITY OF MIAMI</b> <b>DOUGLAS PARK</b></p>	<p><b>CHK. BY</b></p> <p><b>DESCRIPTION</b></p> <p><b>DATE</b></p> <p><b>REV</b></p>	<p><b>DATE</b></p> <p><b>REV</b></p>	
<p><b>CADD FILE:</b></p>		<p><b>DATE:</b> MAY 2015</p>		<p><b>SCALE:</b> AS SHOWN</p>	
<p><b>SCS ENGINEERS</b> STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. 7700 N. KENDALL DRIVE, SUITE 607, MIA, MI, FL 33156 PH. (305) 412-8185 FAX. (305) 412-8105 FL CERTIFICATE OF AUTHORIZATION NO. 00004892</p>		<p><b>DRAWING NO.</b></p> <p><b>Fig. 2</b></p>		<p><b>FL LICENSE NO. 69239</b></p>	

M:\ESMASTER\City of Miami\Douglas Park\DWG\Groundwater Monitoring\Figure 3 - GW analytical map.dwg May 28, 2015 - 4:23pm Layout Name: GW\_ANALYTICAL By: 3617oop

SW 37th Avenue - Douglas Road



MW-3

MW-3	
DATE	4/24/2014
As	5.0 U
Fe	174

MW-2

DATE	4/24/2014	3/17/2015
As	17.4	5.2 I
Fe	7290	29700

IW-1

DATE	4/25/2014
As	5.0 U
Fe	850

MW-1

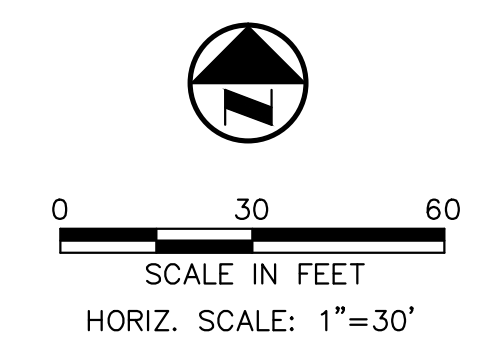
DATE	4/24/2014
As	7.0 I
Fe	342

MW-4

DATE	4/6/2015
Fe	4470

MW-5

DATE	4/6/2015
Fe	2180



**LEGEND**  
 WELL LOCATION

**CLEAN UP TARGET LEVELS ( $\mu\text{g/L}$ )**

ANALYTE	GCTL
Al	200
Sb	6
As	10
Ba	2,000
Cd	5
Cu	1,000
Fe	300/706
Pb	15
Hg	2
Se	50
Ag	100
Total PCBs	0.5
Dioxin TEQs	30

**NOTES**

$\mu\text{g/L}$  - micrograms per Liter  
 U - Analyte was not detected at the laboratory Method Detection Limit (MDL).  
 I - The reported value is between the MDL and the Laboratory Practical Quantitation Limit (PQL).  
**Bold** - Indicates an exceedence of the Groundwater Cleanup Target Level (GCTL).

<p>CLIENT</p> <p><b>CITY OF MIAMI</b></p>	<p>SHEET TITLE</p> <p><b>GROUNDWATER ANALYTICAL SUMMARY</b></p>	<p>PROJECT TITLE</p> <p><b>CITY OF MIAMI DOUGLAS PARK</b></p>	<p>CHK. BY</p> <p> </p>	<p>DESCRIPTION</p> <p> </p>	<p>DATE</p> <p> </p>	<p>REV</p> <p> </p>
<p><b>SCS ENGINEERS</b>                  STEARNS, CONRAD AND SCHMIDT                  CONSULTING ENGINEERS, INC.                  7700 N. KENDALL DRIVE, SUITE 607, MIAMI, FL 33156                  PH. (305) 412-8185 FAX. (305) 412-8105                  FL CERTIFICATE OF AUTHORIZATION NO. 00004892</p> <p>PROJ. NO. 09213010.35                  DATE: 05/15/15                  DWN. BY: CMR                  CHK. BY: EES                  APP. BY: JPT</p>						
CADD FILE:						
DATE: MAY 2015						
SCALE: AS SHOWN						
DRAWING NO. <b>Fig. 3</b>						

Jeffery P. Thompson, P.E.  
 FL LICENSE NO. 69239



## TABLES

**Table 1: GROUNDWATER ELEVATION SUMMARY**  
**Douglas Park (HWR-773)**

<b>WELL NUMBER</b>	MW-1		MW-2		MW-3		MW-4		MW-5	
<b>DIAMETER. (in.)</b>	2		2		2		2		2	
<b>WELL DEPTH (ft)</b>	33		20		20		17		17	
<b>SCREEN INTERVAL (ft)</b>	28-33		10-20		10-20		7-17		7-17	
<b>TOC ELEVATION (ft)</b>	9.48		10.16		10.59		8.29		7.82	
<b>DATE</b>	<b>ELEV</b>	<b>DTW</b>	<b>ELEV</b>	<b>DTW</b>	<b>ELEV</b>	<b>DTW</b>	<b>ELEV</b>	<b>DTW</b>	<b>ELEV</b>	<b>DTW</b>
5/12/2015	0.31	9.17	0.28	9.88	0.77	9.82	0.29	8.00	0.31	7.51

Notes:

1. TOC - Top of Casing
2. TOC Elevations reference NGVD29 (National Geodetic Vertical Datum of 1929)
3. Depth to water referenced from the north side top of the monitoring well casings

**TABLE 2: GROUNDWATER ANALYTICAL  
SUMMARY  
DOUGLAS PARK (HWR-773)**

Sample			
Sample Location/ Sample ID	Date Collected	Arsenic	Iron
		(µg/L)	(µg/L)
Groundwater Cleanup Target Levels		10	300/706*
IW-1	4/25/2014**	5.0 U	<b>850</b>
MW-1	4/24/2014**	7.0 I	342
MW-2	4/24/2014**	<b>17.4</b>	<b>7290</b>
	3/17/2015**	5.2 I	<b>29700</b>
MW-3	4/24/2014**	5.0 U	174
MW-4	4/6/2015	NS	<b>4470</b>
MW-5	4/6/2015	NS	<b>2180</b>

**Notes -**

µg/L - micrograms per liter

GCTLs = Groundwater Cleanup Target Levels specified in Table I of Chapter 62-777, F.A.C.

NADCs = Natural Attenuation Default Source Concentrations specified in Table V of Chapter 62-777, F.A.C.

\* - Miami-Dade County Background Concentrations of Iron in Groundwater memorandum dated December 8, 2005

\*\* - Samples collected by URS Corporation

U - Not detected at the laboratory method detection limit (MDL)

I - Estimated value, the reported value is between the MDL and the practical quantitaion limit (PQL)

**Bold** - Indicates an exceedance of the applicable GCTL

NS = Not Sampled

ATTACHMENT 1  
REGULATORY CORRESPONDENCE



**Department of Regulatory and Economic Resources**

Environmental Resources Management

701 NW 1st Court, 4th Floor

Miami, Florida 33136-3912

T 305-372-6700 F 305-372-6982

Carlos A. Gimenez, Mayor

miamidade.gov

April 17, 2015

Certified Mail No. 7013 2630 0001 2418 0574  
Return Receipt Requested

Alice Bravo, P.E., Deputy City Manager  
Office of the City Manager  
City of Miami  
444 SW 2<sup>nd</sup> Ave  
Miami, FL 33130

Re: Monitoring Well MW-2 Resampling Results Report dated March 25, 2015, prepared by URS Corporation for the Notice of Violation dated November 21, 2013 for the City of Miami, Douglas Park, (HWR-773) located at, near, or in the vicinity of 2795 SW 37<sup>th</sup> Avenue, Miami, Miami-Dade County, Florida.

Dear Ms. Bravo:

The Miami-Dade County Department of Regulatory & Economic Resources, Division of Environmental Resources Management (DERM) has reviewed the above referenced document received via email on March 26, 2015, and offers the following comments:

1. Groundwater levels of Iron in monitoring well MW-2 exceed the Miami-Dade County Background Concentration for this parameter. Therefore, these groundwater levels shall be delineated.
2. Be advised that the Site Assessment Report Addendum (SARA) and the Corrective Action Plan (CAP) requested in DERM's letter dated August 5, 2014 (attached) are overdue.

Be advised that the vertical and horizontal extent of the contaminant plume(s) must be fully delineated. DERM has the option to split any samples deemed necessary with the consultant or laboratory at the subject site. The consultant collecting the samples must perform field sampling work in accordance with the Standard Operating Procedures provided in Chapter 62-160, Florida Administrative Code (FAC), as amended. The laboratory analyzing the samples must perform laboratory analyses pursuant to the National Environmental Laboratory Accreditation Program (NELAP) certification requirements. If the data submitted exhibits a substantial variance from the DERM split sample analysis, a complete re-sampling using two independent certified laboratories will be required.

DERM shall be notified in writing a minimum of three (3) working days prior to the implementation of the referenced plan. Email notifications shall be directed to [DERMPCD@miamidade.gov](mailto:DERMPCD@miamidade.gov). Please include the DERM file number on all correspondence.

Therefore, within sixty (60) days of receipt of this letter, you are hereby required to submit to DERM for review two copies of a Site Assessment Report Addendum (SARA), one paper and one electronic PDF on CD, prepared in accordance with Section 24-44 (2), Code of Miami-Dade County that must address comment No. 1 above.

*Delivering Excellence Every Day*

Alice Bravo, Deputy City Manager  
City of Miami, Douglas Park  
HWR-773  
April 17, 2015  
Page 2 of 2

Failure to adhere to the items and timeframes stipulated above may result in enforcement action for this site.

If you have any questions regarding this letter, please contact Alicia Felipe of the Pollution Remediation Section at [felipa@miamidade.gov](mailto:felipa@miamidade.gov), or (305) 372-6700, or at the letterhead address.

Sincerely



Wilbur Mayorga, P.E., Chief  
Environmental Monitoring & Restoration Division

WM/af

Attachment: DERM letter dated August 5, 2014

pc: Vivek Kamath, P.E., URS ([vik.kamath@aecom.com](mailto:vik.kamath@aecom.com))  
Brittney Odom, SCS ([bodom@scsengineers.com](mailto:bodom@scsengineers.com))  
Harry James, City of Miami Public Works ([hjames@miamigov.com](mailto:hjames@miamigov.com))  
Jeovanny Rodriguez, City of Miami Capital Improvements  
([jeovannyrodriguez@miamigov.com](mailto:jeovannyrodriguez@miamigov.com))  
Samir Elmir, Florida Dept. of Health ([samir.elmir@flhealth.gov](mailto:samir.elmir@flhealth.gov))  
John Andersen, DERM  
Lee Hefty, Director, DERM



Carlos A. Gimenez, Mayor

Department of Regulatory and Economic Resources

Environmental Resources Management

701 NW 1st Court, 4th Floor

Miami, Florida 33136-3912

T 305-372-6700 F 305-372-6982

miamidade.gov

August 5, 2014

Alice Bravo, P.E., Deputy City Manager  
Office of the City Manager  
City of Miami  
444 SW 2<sup>nd</sup> Ave  
Miami, FL 33130

Certified Mail No. 7013 2630 0001 2418 9393  
Return Receipt Requested

Re: Site Assessment Report (SAR) dated July 10, 2014, prepared by URS Corporation for the Notice of Violation dated November 21, 2013 for the City of Miami, Douglas Park, (HWR-773) located at, near, or in the vicinity of 2795 SW 37<sup>th</sup> Avenue, Miami, Miami-Dade County, Florida.

Dear Ms. Bravo:

The Miami-Dade County Department of Regulatory & Economic Resources, Division of Environmental Resources Management (DERM) has reviewed the above referenced document received July 11, 2014, and offers the following comments:

1. Onsite assessment of solid waste and contaminants of concern in soil is sufficient to develop and implement an onsite Corrective Action Plan (CAP). Provide updated soil cover contour maps that include tabular data adjacent to each point showing the solid waste thickness (i.e., 0-6 inches-no solid waste; 6-24 inches – 10% solid waste (glass, tiles, etc); 2 feet to 20 feet – 80% solid waste, etc.)
2. Be advised that additional offsite solid waste delineation is required pursuant to the DERM review letter dated February 19, 2014 (attached). Additionally, horizontal and vertical delineation of documented soil contamination near the property boundaries is required offsite pursuant to the DERM review letter dated November 21, 2013 (attached). All remaining assessment data shall be presented in the Site Assessment Report Addendum required below. Also, provide all City of Miami correspondence documenting efforts to notify offsite property owners of ongoing assessment and acquisition of offsite site access agreements and copy DERM on all future correspondence.
3. DERM concurs with the conversion of MW-2 to a permanent monitoring well. Resample this well for all contaminants of concern previously sampled for. Do not abandon the remaining groundwater monitoring wells at this time. Be advised, based on the results of the resampling additional assessment may be required.
4. Do not abandon the methane monitoring probes at this time.

Be advised that the vertical and horizontal extent of the contaminant plume(s) must be fully delineated. DERM has the option to split any samples deemed necessary with the consultant or laboratory at the subject site. The consultant collecting the samples must perform field sampling work in accordance with the Standard Operating Procedures provided in Chapter 62-160, Florida Administrative Code (FAC), as amended. The laboratory analyzing the samples must perform laboratory analyses pursuant to the National Environmental Laboratory

*Delivering Excellence Every Day*

Alice Bravo, Deputy City Manager  
City of Miami, Douglas Park  
HWR-773  
August 5, 2014  
Page 2 of 2

Accreditation Program (NELAP) certification requirements. If the data submitted exhibits a substantial variance from the DERM split sample analysis, a complete re-sampling using two independent certified laboratories will be required.

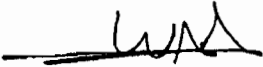
DERM shall be notified in writing a minimum of three (3) working days prior to the implementation of the referenced plan. Email notifications shall be directed to [DERMPCD@miamidade.gov](mailto:DERMPCD@miamidade.gov). Please include the DERM file number on all correspondence.

Therefore, within sixty (60) days of receipt of this letter, you are hereby required to submit to DERM for review two copies of a Site Assessment Report Addendum (SARA) and Corrective Action Plan (CAP), one paper and one electronic PDF on CD, prepared in accordance with Section 24-44 (2), Code of Miami-Dade County that must address the above comments.

Failure to adhere to the items and timeframes stipulated above may result in enforcement action for this site.

If you have any questions regarding this letter, please contact Rob Graessel of the Environmental Assessment Section at [graesr@miamidade.gov](mailto:graesr@miamidade.gov), or (305) 372-6700, or at the letterhead address.

Sincerely



Wilbur Mayorga, P.E., Chief  
Environmental Monitoring & Restoration Division

WM/rg

Attachments: DERM letters of February 19, 2014 & November 21, 2013

pc: Harry James, City of Miami Public Works ([hjames@miamigov.com](mailto:hjames@miamigov.com))  
Jeovanny Rodriguez, City of Miami Capital Improvements ([jeovannyrodriguez@miamigov.com](mailto:jeovannyrodriguez@miamigov.com))  
Samir Elmir, Florida Dept. of Health ([samir.elmir@flhealth.gov](mailto:samir.elmir@flhealth.gov))  
Lee Hefty, Director, DERM



ATTACHMENT 2  
WELL CONSTRUCTION AND DEVELOPMENT LOGS AND  
SOIL BORING LOGS

## WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA					
Well Number: <b>MW-4</b>	Site Name: <b>Douglas Park</b>	FDEP Facility I.D. Number:	Well Install Date(s): <b>2-Apr-2015</b>		
Well Location and Type (check appropriate boxes): <input checked="" type="checkbox"/> On-Site <input type="checkbox"/> Right-of-Way <input type="checkbox"/> Off-Site Private Property <input type="checkbox"/> Above Grade (AG) <input checked="" type="checkbox"/> Flush-to-Grade		Well Purpose: <input type="checkbox"/> Perched Monitoring <input checked="" type="checkbox"/> Shallow (Water-Table) Monitoring <input type="checkbox"/> Intermediate or Deep Monitoring <input type="checkbox"/> Remediation or Other (describe)		Well Install Method: <b>Hollow Stem Auger</b>	
If AG, list feet of riser above land surface:				Surface Casing Install Method: <b>N/A</b>	
Borehole Depth (feet): <b>17.5</b>	Well Depth (feet): <b>17</b>	Borehole Diameter (inches): <b>4 1/4</b>	Manhole Diameter (inches): <b>8</b>	Well Pad Size: <b>1.5</b> feet by <b>1.5</b> feet	
Riser Diameter and Material: <b>Sch. 40 PVC</b>		Riser/Screen Connections: <input type="checkbox"/> Flush-Threaded <input type="checkbox"/> Other (describe)	Riser Length: <b>7</b> feet from <b>0</b> feet to <b>7</b> feet		
Screen Diameter and Material: <b>Sch. 40 Slotted PVC</b>		Screen Slot Size: <b>0.01</b>	Screen Length: <b>10</b> feet from <b>7</b> feet to <b>17</b> feet		
1 <sup>st</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		1 <sup>st</sup> Surface Casing I.D. (inches):	1 <sup>st</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
2 <sup>nd</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		2 <sup>nd</sup> Surface Casing I.D. (inches):	2 <sup>nd</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
3 <sup>rd</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		3 <sup>rd</sup> Surface Casing I.D. (inches):	3 <sup>rd</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
Filter Pack Material and Size: <b>20/30 silica sand</b>	Prepacked Filter Around Screen (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Filter Pack Length: <b>12</b> feet from <b>17</b> feet to <b>5</b> feet		
Filter Pack Seal Material and Size: <b>fine grained sand</b>		Filter Pack Seal Length: <b>2</b> feet from <b>5</b> feet to <b>3</b> feet			
Surface Seal Material: <b>Grout</b>		Surface Seal Length: <b>3</b> feet from <b>3</b> feet to <b>0</b> feet			

WELL DEVELOPMENT DATA			
Well Development Date: <b>2-Apr-2015</b>	Well Development Method (check one): <input type="checkbox"/> Surge/Pu <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Compressed Air <input type="checkbox"/> Other (describe)		
Development Pump Type (check): <input checked="" type="checkbox"/> Centrifugal <input type="checkbox"/> Peristaltic <input type="checkbox"/> Submersible <input type="checkbox"/> Other (describe)	Depth to Groundwater (before developing in feet): <b>8.5</b>		
Pumping Rate (gallons per minute): <b>3.7</b>	Maximum Drawdown of Groundwater During Development (feet): <b>9.25</b>	Well Purged Dry (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pumping Condition (check one): <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	Total Development Water Removed (gallons): <b>55</b>	Development Duration (minutes): <b>15</b>	Development Water Drummed (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Appearance (color and odor) At Start of Development: <b>Tom Cloudy, No odor</b>		Water Appearance (color and odor) At End of Development: <b>Clear, No odor</b>	

WELL CONSTRUCTION OR DEVELOPMENT REMARKS
<b>DTW after development = 8.45</b>

# BORING LOG

Boring/Well Number: <i>MW-4</i>		Permit Number:		FDEP Facility Identification Number:	
Site Name: <i>Douglas Park</i>		Borehole Start Date: <i>4/2/15</i>	Borehole Start Time: <i>9:55</i> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	End Date: <i>4/2/15</i>	End Time: <i>10:00</i> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM
Environmental Contractor: <i>SCS Engineers</i>		Geologist's Name:		Environmental Technician's Name: <i>Kevin Ramirez</i>	
Drilling Company: <i>JAE</i>	Pavement Thickness (inches): <i>0</i>	Borehole Diameter (inches): <i>4 1/4</i>	Borehole Depth (feet): <i>14</i>		
Drilling Method(s): <i>Hand Auger / Direct Push</i>	Apparent Borehole DTW (in feet from soil moisture content): <i>8</i>	Measured Well DTW (in feet after water recharges in well): <i>8.5</i>	OVA (list model and check type): <i>N/A</i> <input type="checkbox"/> FID <input type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other <i>(describe if other or multiple items are checked):</i>					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							0.5	<i>0-6" Dark brown sandy topsoil</i>			<i>Samples Not Collected</i>
							1				
							1.5				
							2	<i>6"-6 Grey medium to fine gravel sand w/ LS frags and 1 piece of glass</i>			
							2.5				
							3				
							3.5	<i>6-7 med. grey m-f gravel sand w/ concrete frags</i>			
							4				
							4.5	<i>7-8 Dark brown m-fine gravel sand with pieces of shingles and paper</i>			
							5				
							5.5				
							6				
							6.5				
							7	<i>8-14 - Grey m-f gr sand w/ LS frags</i>			
							7.5				
							8				
							8.5				
							9	<i>Water table @ 8ft</i>			
							9.5				
							10	<i>Boring terminated at 14</i>			
							10.5				
							11				
							11.5				
							12				

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

## WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA					
Well Number: <i>MW-5</i>	Site Name: <i>Douglas Park</i>	FDEP Facility I.D. Number:	Well Install Date(s): <i>2-Apr.-2015</i>		
Well Location and Type (check appropriate boxes): <input checked="" type="checkbox"/> On-Site <input type="checkbox"/> Right-of-Way <input type="checkbox"/> Off-Site Private Property <input type="checkbox"/> Above Grade (AG) <input checked="" type="checkbox"/> Flush-to-Grade		Well Purpose: <input type="checkbox"/> Perched Monitoring <input checked="" type="checkbox"/> Shallow (Water-Table) Monitoring <input type="checkbox"/> Intermediate or Deep Monitoring <input type="checkbox"/> Remediation or Other (describe)		Well Install Method: <i>Hollow Stem Auger</i>	
If AG, list feet of riser above land surface:		Surface Casing Install Method: <i>N/A</i>			
Borehole Depth (feet): <i>17.5</i>	Well Depth (feet): <i>17</i>	Borehole Diameter (inches): <i>4 1/4</i>	Manhole Diameter (inches): <i>8</i>	Well Pad Size: <i>1.5</i> feet by <i>1.5</i> feet	
Riser Diameter and Material: <i>Sch. 40 PVC</i>		Riser/Screen Connections: <input checked="" type="checkbox"/> Flush-T threaded <input type="checkbox"/> Other (describe)	Riser Length: <i>7</i> feet from <i>0</i> feet to <i>7</i> feet		
Screen Diameter and Material: <i>Sch 40 slotted PVC</i>		Screen Slot Size: <i>0.01</i>	Screen Length: <i>10</i> feet from <i>7</i> feet to <i>17</i> feet		
1 <sup>st</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		1 <sup>st</sup> Surface Casing I.D. (inches):	1 <sup>st</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
2 <sup>nd</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		2 <sup>nd</sup> Surface Casing I.D. (inches):	2 <sup>nd</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
3 <sup>rd</sup> Surface Casing Material: also check: <input type="checkbox"/> Permanent <input type="checkbox"/> Temporary		3 <sup>rd</sup> Surface Casing I.D. (inches):	3 <sup>rd</sup> Surface Casing Length: _____ feet from _____ feet to _____ feet		
Filter Pack Material and Size: <i>20/30 silica sand</i>	Prepacked Filter Around Screen (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Filter Pack Length: <i>12</i> feet from <i>17</i> feet to <i>5</i> feet		
Filter Pack Seal Material and Size: <i>fine grained sand</i>		Filter Pack Seal Length: <i>2</i> feet from <i>5</i> feet to <i>3</i> feet			
Surface Seal Material: <i>grout</i>		Surface Seal Length: <i>3</i> feet from <i>3</i> feet to <i>0</i> feet			

WELL DEVELOPMENT DATA			
Well Development Date: <i>2-Apr.-2015</i>	Well Development Method (check one): <input type="checkbox"/> Surge/Pu <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Compressed Air <input type="checkbox"/> Other (describe)		
Development Pump Type (check): <input checked="" type="checkbox"/> Centrifugal <input type="checkbox"/> Peristaltic <input type="checkbox"/> Submersible <input type="checkbox"/> Other (describe)		Depth to Groundwater (before developing in feet): <i>8.5</i>	
Pumping Rate (gallons per minute): <i>3.7</i>	Maximum Drawdown of Groundwater During Development (feet): <i>8.30</i>	Well Purged Dry (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pumping Condition (check one): <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	Total Development Water Removed (gallons): <i>55</i>	Development Duration (minutes): <i>15</i>	Development Water Drummed (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Appearance (color and odor) At Start of Development: <i>Tan Cloudy, No odor</i>		Water Appearance (color and odor) At End of Development: <i>Clear, No Odor</i>	

WELL CONSTRUCTION OR DEVELOPMENT REMARKS
<i>DTW after Development = 8.21</i>

# BORING LOG

Boring/Well Number: <b>MW-45</b>		Permit Number:		FDEP Facility Identification Number:	
Site Name: <b>Douglas Park</b>		Borehole Start Date: <b>2-Apr-2015</b>	Borehole Start Time: <b>11:40</b>	<input checked="" type="checkbox"/> AM	<input type="checkbox"/> PM
		End Date: <b>2-Apr-2015</b>	End Time:	<input type="checkbox"/> AM	<input type="checkbox"/> PM
Environmental Contractor: <b>SCS Engineers</b>		Geologist's Name:		Environmental Technician's Name: <b>Kevin Ramirez</b>	
Drilling Company: <b>JAEF</b>	Pavement Thickness (inches): <b>0</b>	Borehole Diameter (inches): <b>4 1/4</b>		Borehole Depth (feet): <b>5</b>	
Drilling Method(s): <b>Direct Push</b>	Apparent Borehole DTW (in feet from soil moisture content): <b>N/A</b>	Measured Well DTW (in feet after water recharges in well): <b>N/A</b>	OVA (list model and check type): <b>N/A</b> <input type="checkbox"/> FID <input type="checkbox"/> PID		
Disposition of Drill Cuttings [check method(s)]: <input checked="" type="checkbox"/> Drum <input type="checkbox"/> Spread <input type="checkbox"/> Backfill <input type="checkbox"/> Stockpile <input type="checkbox"/> Other (describe if other or multiple items are checked):					
Borehole Completion (check one): <input checked="" type="checkbox"/> Well <input type="checkbox"/> Grout <input type="checkbox"/> Bentonite <input type="checkbox"/> Backfill <input type="checkbox"/> Other (describe)					

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							1	0-1 Dark brown m-f gr sand w/ LS frags and 1 piece of glass			Sample Not Collected
							2	1-1.5 Gray/Tan m-f gr sand w/ LS frags			
							3	1.5-2 Brown, m-f gr sand			
							4	w/ LS frags			
							5	2-3 Dark brown m-f gr sand w/ LS frags			
							6	and pieces of shingles throughout			
							7				
							8	3-4 Tan w/ m-f gr sand w/ LS frags			
							9	4-5 Grey m-f gr sand w concrete frags			
							10				
							11	Boring terminated @ 5 feet			
							12				

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings  
 Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

ATTACHMENT 3  
INVESTIGATION DERIVED WASTE DISPOSAL MANIFEST

Chemtrec

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone  
800-424-9300

4. Waste Tracking Number

CEI 0049350

5. Generator's Name and Mailing Address

CITY OF MIAMI - DOUGLAS PARK  
2795 SW 37TH AVE  
MIAMI  
FL 33133

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name

CLARK ENVIRONMENTAL INC.

863-425-4884

U.S. EPA ID Number

FLD984206003

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

CLARK ENVIRONMENTAL INC.  
755 N. PRAIRIE INDUSTRIAL PKWY  
MIAMI BERRY  
FL 33860

863-425-4884

U.S. EPA ID Number

FLD984206003

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1. INDUSTRIAL WASTE NON-REGULATED MATERIAL

001

DM

00055

G

2. INDUSTRIAL WASTE NON-REGULATED MATERIAL

002

DM

00110

G

13. Special Handling Instructions and Additional Information

37240

- a. DC01
- b. DW02
- c.
- d.

SOLID LIQUID

**WASTE PROCESS HAS NOT CHANGED SINCE PROFILED**

**Broker:**

SCS ENGINEERS

**Broker Site Contact:**

KEVIN RAMIREZ

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year

Kevin Ramirez (As Agent)

[Signature] (As Agent)

5 | 12 | 15

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Jason Anoley

[Signature]

05 | 12 | 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

Month Day Year

17c. Signature of Alternate Facility (or Generator)

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

Kelly Grable

[Signature]

05 | 12 | 15

DESIGNATED FACILITY TO GENERATOR

ATTACHMENT 4  
GROUNDWATER SAMPLING AND CALIBRATION LOGS



**Form FD 9000-24  
GROUNDWATER SAMPLING LOG**

SITE NAME: <u>Douglas Park</u>	SITE LOCATION: <u>2795 SW 37 Ave Miami FL</u>
WELL NO: <u>MW-4</u>	SAMPLE ID: <u>MW-4</u> DATE: <u>4-6-15</u>

**PURGING DATA**

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches): <u>1/4</u>	WELL SCREEN INTERVAL DEPTH: <u>7</u> feet to <u>17</u> feet	STATIC DEPTH TO WATER (feet): <u>8.44</u>	PURGE PUMP TYPE OR BAILER: <u>PP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <u>17.00</u> feet - <u>8.44</u> feet ) X <u>.16</u> gallons/foot = <u>1.37</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) =                      gallons + (                      gallons/foot X                      feet ) +                      gallons =                      gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>12.7</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>12.7</u>	PURGING INITIATED AT: <u>1400</u>	PURGING ENDED AT: <u>1411</u>	TOTAL VOLUME PURGED (gallons): <u>1.64</u>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) <u>µmhos/cm</u> or <u>µS/cm</u>	DISSOLVED OXYGEN (circle units) <u>(mg/L)</u> or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<u>1407</u>	<u>1.0</u>	<u>1.0</u>	<u>0.16</u>	<u>8.48</u>	<u>6.94</u>	<u>28.59</u>	<u>1049</u>	<u>0.37</u>	<u>1.19</u>	<u>clear</u>	<u>none</u>
<u>1409</u>	<u>0.32</u>	<u>1.32</u>	<u>0.16</u>	<u>8.48</u>	<u>6.93</u>	<u>28.56</u>	<u>1051</u>	<u>0.39</u>	<u>1.16</u>	<u>"</u>	<u>"</u>
<u>1411</u>	<u>0.32</u>	<u>1.64</u>	<u>0.16</u>	<u>8.48</u>	<u>6.93</u>	<u>28.51</u>	<u>1052</u>	<u>0.40</u>	<u>1.14</u>	<u>"</u>	<u>"</u>

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88  
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016  
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <u>David Suchinsky / SCS</u>			SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>			SAMPLING INITIATED AT: <u>1412</u>	SAMPLING ENDED AT: <u>1414</u>		
PUMP OR TUBING DEPTH IN WELL (feet): <u>12.7</u>			TUBING MATERIAL CODE: <u>PE</u>			FIELD-FILTERED: Y <input checked="" type="checkbox"/> <u>N</u>	FILTER SIZE: _____ µm		
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> <u>N</u>			TUBING Y <input checked="" type="checkbox"/> <u>N</u> (replaced)			DUPLICATE: Y <input checked="" type="checkbox"/> <u>N</u>			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
<u>MW-4</u>	<u>1</u>	<u>PE</u>	<u>250ml</u>	<u>HNO3</u>	<u>0</u>	<u>6.2</u>	<u>Fe</u>	<u>APP</u>	<u>~200</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)  
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
pH: ± 0.2 units    Temperature: ± 0.2 °C    Specific Conductance: ± 5%    Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater)    Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

**Form FD 9000-24**  
**GROUNDWATER SAMPLING LOG**

SITE NAME: <u>Douglas Park</u>		SITE LOCATION: <u>2795 SW 37 Ave. Miami, FL</u>	
WELL NO: <u>MW.5</u>	SAMPLE ID: <u>MW.5</u>	DATE: <u>4.6-15</u>	

**PURGING DATA**

WELL DIAMETER (inches): <u>2"</u>	TUBING DIAMETER (inches): <u>1/4"</u>	WELL SCREEN INTERVAL DEPTH: <u>7</u> feet to <u>17</u> feet	STATIC DEPTH TO WATER (feet): <u>7.93</u>	PURGE PUMP TYPE OR BAILER: <u>PP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = ( <u>17.00</u> feet - <u>7.93</u> feet) X <u>0.16</u> gallons/foot = <u>1.45</u> gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = _____ gallons + ( _____ gallons/foot X _____ feet) + _____ gallons = _____ gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>12.5</u>	FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>12.5</u>	PURGING INITIATED AT: <u>1425</u>	PURGING ENDED AT: <u>1436</u>	TOTAL VOLUME PURGED (gallons): <u>1.60</u>							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) <u>µmhos/cm</u> or <u>µS/cm</u>	DISSOLVED OXYGEN (circle units) <u>mg/L</u> or <u>% saturation</u>	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
<u>1432</u>	<u>1.0</u>	<u>1.0</u>	<u>0.15</u>	<u>7.97</u>	<u>6.96</u>	<u>27.55</u>	<u>896</u>	<u>0.34</u>	<u>4.86</u>	<u>clear</u>	<u>none</u>
<u>1434</u>	<u>0.30</u>	<u>1.30</u>	<u>0.15</u>	<u>7.97</u>	<u>6.97</u>	<u>27.51</u>	<u>894</u>	<u>0.33</u>	<u>4.83</u>	<u>  </u>	<u>  </u>
<u>1436</u>	<u>0.30</u>	<u>1.60</u>	<u>0.15</u>	<u>7.97</u>	<u>6.96</u>	<u>27.47</u>	<u>893</u>	<u>0.33</u>	<u>4.82</u>	<u>  </u>	<u>  </u>

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88  
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.008; 1/2" = 0.010; 5/8" = 0.016  
 PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

**SAMPLING DATA**

SAMPLED BY (PRINT) / AFFILIATION: <u>David Suchinsky / SCS</u>		SAMPLER(S) SIGNATURE(S): <u>[Signature]</u>		SAMPLING INITIATED AT: <u>1437</u>	SAMPLING ENDED AT: <u>1439</u>				
PUMP OR TUBING DEPTH IN WELL (feet): <u>12.5</u>		TUBING MATERIAL CODE: <u>PE</u>	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N	FILTER SIZE: _____ µm					
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N		TUBING Y <input checked="" type="checkbox"/> N (replaced)		DUPLICATE: Y <input checked="" type="checkbox"/> N					
SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION						
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
<u>MW.5</u>	<u>1</u>	<u>PE</u>	<u>250ml</u>	<u>HNO3</u>	<u>0</u>	<u>&lt;2</u>	<u>Fe</u>	<u>APP</u>	<u>≈ 200</u>

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.  
 2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)  
 pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Boldly "Y" this box if there is qualified data on this page.

Form FD9000-8 CALIBRATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000) 11-10-05

Project/Site: Triangle Hotel / 2795 SW 37 Ave Miami FL Date: 4/6/15 Meter # YSI 556 (#1)

Temperature (Quarterly)		For Date of Last Temperature Verification see _____ in log book									
Dissolved Oxygen	DEP SOP FT 1500	Initials	Date	Time	Probe Charge	Probe Gain	mg/L	Temp °C	% DO	Saturation mg/L (from chart)	Pass or Fail

CAL ICV <u>CCV</u>		<u>DS</u>	<u>4/6/15</u>	<u>1335</u>			<u>7.74</u>	<u>29.07</u>	<u>104.1</u>	<u>7.678</u>	<u>P</u>
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P

Specific Conductance	DEP SOP FT 1200	Initials	Date	Time	Standard $\mu\text{mhos/cm}$	Exp. Date	Lot #	Bottle #	Cell Constant	Reading $\mu\text{mhos/cm}$	Pass or Fail
----------------------	-----------------	----------	------	------	------------------------------	-----------	-------	----------	---------------	-----------------------------	--------------

CAL ICV <u>CCV</u>		<u>DS</u>	<u>4/6/15</u>	<u>1337</u>	<u>1423</u>	<u>5/5/15</u>	<u>10984</u>			<u>1363</u>	<u>P</u>
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P

pH	DEP SOP FT 1100	Initials	Date	Time	Standard SU	Exp. Date	Lot #	Bottle #	Slope	Reading SU	Pass or Fail
----	-----------------	----------	------	------	-------------	-----------	-------	----------	-------	------------	--------------

CAL ICV <u>CCV</u>		<u>DS</u>	<u>4/6/15</u>	<u>1339</u>	<u>7.0</u>	<u>4/30/16</u>				<u>7.08</u>	<u>P</u>
CAL ICV <u>CCV</u>		<u>DS</u>	<u>4/6/15</u>	<u>1341</u>	<u>4.0</u>	<u>6-30-15</u>				<u>4.12</u>	<u>P</u>
CAL ICV <u>CCV</u>		<u>DS</u>	<u>4/6/15</u>	<u>1344</u>	<u>10.0</u>	<u>6-30-15</u>				<u>9.92</u>	<u>P</u>
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P
CAL ICV CCV											P

Maintenance: Weekly pH Slope: \_\_\_\_\_ Specific Conductance Probe Cleaned? Yes No Dissolved Oxygen Membrane Changed: Yes No

Notes:

Perform only in Calibrate Mode:  
 Perform only in Run Mode:  
 Perform only in Run Mode:

CAL - Calibrate -  
 ICV - Initial Calibration Verification  
 CCV - Continuing Calibration Verification

ATTACHMENT 5  
LABORATORY ANALYTICAL REPORT AND CHAIN OF  
CUSTODY

April 13, 2015

Brittney Odom  
SCS ES Consultants  
7700 N Kendall Drive  
#607  
Miami, FL 33156

RE: Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

Dear Brittney Odom:

Enclosed are the analytical results for sample(s) received by the laboratory on April 07, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Christina Raschke  
christina.raschke@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

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### 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  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Massachusetts Certification #: M-FL1264  
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 Hampshire Certification #: 2958  
New Jersey Certification #: FL765  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
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  
Washington Certification #: C955  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 09213010.41/Douglas Park

Pace Project No.: 35182732

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35182732001	MW-4	Water	04/06/15 14:14	04/07/15 23:20
35182732002	MW-5	Water	04/06/15 14:39	04/07/15 23:20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 09213010.41/Douglas Park

Pace Project No.: 35182732

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35182732001	MW-4	EPA 6010	CKJ	1	PASI-O
35182732002	MW-5	EPA 6010	CKJ	1	PASI-O

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

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**Method:** EPA 6010  
**Description:** 6010 MET ICP  
**Client:** SCS ES Consultants, Inc.  
**Date:** April 13, 2015

**General Information:**

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 09213010.41/Douglas Park

Pace Project No.: 35182732

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**Sample: MW-4**      **Lab ID: 35182732001**      Collected: 04/06/15 14:14      Received: 04/07/15 23:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	-----	-----	----	----------	----------	---------	------

**6010 MET ICP**

Analytical Method: EPA 6010      Preparation Method: EPA 3010

Iron	<b>4470</b>	ug/L	40.0	20.0	1	04/10/15 15:30	04/11/15 20:12	7439-89-6	
------	-------------	------	------	------	---	----------------	----------------	-----------	--

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

**Sample: MW-5**      **Lab ID: 35182732002**      Collected: 04/06/15 14:39      Received: 04/07/15 23:20      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010    Preparation Method: EPA 3010									
Iron	<b>2180</b>	ug/L	40.0	20.0	1	04/10/15 15:30	04/11/15 20:16	7439-89-6	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

QC Batch: MPRP/23527 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET  
Associated Lab Samples: 35182732001, 35182732002

METHOD BLANK: 1180221 Matrix: Water  
Associated Lab Samples: 35182732001, 35182732002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	20.0 U	40.0	04/11/15 16:13	

LABORATORY CONTROL SAMPLE: 1180222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	2500	2410	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1180927 1180928

Parameter	Units	35182732002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Iron	ug/L	2180	2500	2500	4610	4480	97	92	75-125	3	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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## QUALIFIERS

Project: 09213010.41/Douglas Park  
Pace Project No.: 35182732

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### 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

U Compound was analyzed for but not detected.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 09213010.41/Douglas Park

Pace Project No.: 35182732

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
35182732001	MW-4	EPA 3010	MPRP/23527	EPA 6010	ICP/14383
35182732002	MW-5	EPA 3010	MPRP/23527	EPA 6010	ICP/14383

### REPORT OF LABORATORY ANALYSIS

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WO#: 35182732



35182732

CHAIN-C  
The Chain-of-



**Section A**  
Required Client Information:

Company: SCS Engineers  
 Address: 7700 N Kendall Drive, Suite 300  
 Miami, FL 33156  
 Email: bodom@scsengineers.com  
 Phone: NONE  
 Requested Due Date:

Report To: Brittney Odom  
 Copy To:  
 Purchase Order #: 484  
 Project Name: Douglas Park  
 Project #: 09213010.41

Invoice Information:  
 Attention: Brittney Odom  
 Company Name: SCS Engineers  
 Address: 7700 N Kendall Drive, Suite 300  
 Pace Quote:  
 Pace Project Manager: christina\_raschke@pacelabs.com  
 Pace Profile #: 51200-2

Regulatory Agency  
 State / Location  
 FL

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	PRESERVATIVES		ANALYSES TEST	Y/N	RESIDUAL CHLORINE (Y/N)
			START DATE	END DATE				UNPRESERVED	H2SO4			
1	MW-4	DW	4/6/15	4/14	1		1	✓			X	
2	MW-5	WT	4/6/15	4/13/15	1		1	✓			X	
3		WW										
4		P										
5		SL										
6		OL										
7		WP										
8		AR										
9		OT										
10		TS										
11												
12												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Brittney Odom</i>	4/15/15	1320	<i>[Signature]</i>	4/15/15	1320	
	<i>[Signature]</i>	4/15/15	1745	<i>[Signature]</i>	4/15/15	1320-103	Y N
				<i>[Signature]</i>		1199	

SAMPLER NAME AND SIGNATURE  
 PRINT Name of SAMPLER:  
 SIGNATURE of SAMPLER:  
 DATE Signed:



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-FL-C-007 rev. 06

Document Revised:  
August 11, 2014  
Issuing Authority:  
Pace Florida Quality Office

**Sample Condition Upon Receipt Form (SCUR)**

Table Number: \_\_\_\_\_

Client Name: SCS Project # 35182732

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace

Other \_\_\_\_\_

Tracking # \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals Intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used T199 Type of Ice:  Wet  Blue  None

Cooler Temperature °C -13 (Visual) 0 (Correction Factor) -1.3 (Actual)

Date and Initials of person examining contents: 4/7/18 TH

2320

(Temp should be above freezing to 6°C). If below 0°C, then was sample frozen?

Yes  No

Receipt of samples satisfactory:  Yes  No

Rush TAT requested on COC: \_\_\_\_\_

If yes, then all conditions below were met:

If no, then mark box & describe issue (use comments area if necessary):

Chain of Custody Present	<input type="checkbox"/>
Chain of Custody Filled Out	<input type="checkbox"/>
Relinquished Signature & Sampler Name COC	<input type="checkbox"/>
Samples Arrived within Hold Time	<input type="checkbox"/>
Sufficient Volume	<input type="checkbox"/>
Correct Containers Used	<input type="checkbox"/>
Containers Intact	<input type="checkbox"/>
Sample Labels match COC (sample IDs & date/time of collection)	<input type="checkbox"/>
	No Labels: <input type="checkbox"/> No Time/Date on Labels: <input type="checkbox"/>
All containers needing preservation are found to be in compliance with EPA recommendation:	<input type="checkbox"/>
No Headspace in VOA Vials (>6mm):	<input type="checkbox"/>

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution (use back for additional comments):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

**Finished Product Information Only**

F.P. Sample ID: \_\_\_\_\_

Production Code: \_\_\_\_\_

Date/Time Opened: \_\_\_\_\_

Number of Unopened Bottles Remaining: \_\_\_\_\_

**Size & Qty of Bottles Received**

- \_\_\_\_\_ x 5 Gal
- \_\_\_\_\_ x 2.5 Gal
- \_\_\_\_\_ x 1 Gal
- \_\_\_\_\_ x 1 Liter
- \_\_\_\_\_ x 500 mL
- \_\_\_\_\_ x 250 mL
- \_\_\_\_\_ x Other: \_\_\_\_\_

Extra Sample in Shed: Yes No