Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

January 11, 2019
File Number 18-55-9607
Document No. 3

VHB
8043 Cooper Creek Boulevard, Suite 201
University Park, Florida 34201

Attention: Mr. Michael Conn
Senior Scientist

Subject: **Geotechnical and Environmental Engineering Services – Final Report**
Sediment Samples from Weeki Wachee River and Adjacent Canals
Hernando County, Florida

Dear Mr. Conn:

Ardaman & Associates, Inc. (Ardaman) is pleased to submit this report of our subsurface soil exploration program for the above referenced project. Our services were authorized by an September 24, 2018 written agreement from VHB. The purpose of this exploration program was to evaluate the general stratification and conditions of the subsurface soils at the subject site in order to prepare a geotechnical report for the proposed Weeki Wachee Channel Restoration Project.

This Report of Subsurface Soil Exploration was prepared for the exclusive use of VHB and their consultants. The conclusions and recommendations made herein are applicable only to those structures and facilities described herein. This geotechnical/environmental study was performed in accordance with generally accepted geotechnical/environmental engineering practices. No other warranty, expressed or implied, is made. The assessment of site environmental conditions for the presence of pollutants in the soil or rock at this site was beyond the scope of this exploration.

Project Information

Sampling and testing of sediment in the bottom of the Weeki Wachee River and adjacent waterways has been requested. VHB sampling plans were provided to Ardaman on October 19, 2018. A total of 30 locations were sampled as part of this report. The segment of the river where sampling was performed starts half a mile west of the Weeki Wachee Springs attraction at the southwest corner of US 19 and SR 50 and extends about 3 ½ miles west to Shoal Line Boulevard (also known as Highway 597). All samples were obtained in water locations. Soil samples were collected to a maximum depth of 5 feet below the

sediment/mud line or until sample refusal in rock/very dense sand/very stiff clay.

Field Exploration

Ardaman sent a crew to obtain samples of sandy sediment (not intact rock) at or very near the 30 locations. All locations are in water. The sediment samples were collected and placed in laboratory supplied samples containers in accordance FDEP procedures. A log was prepared for each sampling location with a visual classification of each sediment sample as it is collected. During the sampling, the river was crowded with numerous kayaks and vessels. These numerous vessels impeded access to some locations, requiring sample locations to be offset a few feet in some cases to reduce disruption to vessel traffic during sampling.

FIELD EXPLORATION

Test Locations

The soil boring locations were provided by VHB. All proposed 30 test locations were accessible to our sampling team. The test locations were located by GPS coordinates and field modified as needed. Our crew obtained samples of sandy sediment (not intact rock) at or very near the 30 locations with all locations being in water. The sediment samples were collected as deep as 5 feet below the sediment/mudline. The sediment samples were composited at each sampling location and placed in laboratory supplied containers for chemical analysis and soil jars for soil properties testing. The samples were collected in accordance FDEP procedures. A log was prepared for each sampling location with a visual classification of each sediment sample as it was collected.

The approximate boring locations are shown on the Boring Location Plans (Figure 1) attached to this report and should be considered accurate only to the degree implied by the method used. Ground surface elevations at the boring locations were neither furnished nor determined.

LABORATORY TESTING

The field soil boring logs and recovered soil samples were transported to our Tampa office following the completion of the field exploration activities. Pace Analytical, Inc. picked up environmental samples for chemical analysis. Each representative sample was examined by a geotechnical engineer in the field (prior to compositing) to identify the engineering classification of the soil. The visual classification of the samples was performed using the current Unified Soil Classification System in general accordance with the procedures outlined in ASTM Standard D-2487. In addition, grain size analyses, organic content testing,

and Specific Gravity testing were also performed on all samples which were placed concurrently in soil jars at the same time as the chemical jars.

Chemical Analysis

The composited samples were analyzed for Resource Recovery and Conservation Act Eight (RCRA-8) metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. In addition, the samples were also analyzed by the Synthetic Precipitation Leaching Procedure (SPLP) procedure utilizing specified laboratory solution as designated by the Method standard.

Sample Location 1 was above the residential direct exposure of 2.1 mg/kg for Arsenic. No other exceedances above the residential direct exposure were noted in the remainder of the samples. All of the results are shown in Table 1 in Appendix B. In addition, the laboratory results and chain of custody are also located in Appendix B.

Soils Laboratory Evaluation

The field soil boring logs and recovered soil samples were transported to our Tampa office following the completion of the field exploration activities. Each representative sample was examined by a geotechnical engineer in our laboratory to identify the engineering classification of the soil and rock. The visual classification of the samples was performed using the current Unified Soil Classification System in general accordance with the procedures outlined in ASTM Standard D-2487. Soils laboratory testing was performed on composited (combined) soil samples in general accordance with ASTM standards. Test results are included in Appendix C of this report.

Soils lab testing included determination of their percentage of organic constituents, using the test procedures outlined in ASTM Standard D-2974. The results of these tests are useful in confirming our visual classification of these soils, and in evaluating their compressibility and suitability for use as fill.

Grain size analyses were also performed on the soil samples. This analysis provides the particle size distribution and is helpful to determine the relative sand and fines (clay and silt) contents of the material.

Specific gravity testing was also performed for the soil samples, as requested. This testing determines the density of the soil particles relative to water.

SUBSURFACE CONDITIONS

The delineation of the vertical extent of individual soil strata, the identification of pertinent soil engineering properties, where applicable, and a description of each geologic layer discovered during the course of this geotechnical study is given in the sounding profiles illustrated on the Penetration Sounding Logs attached to this report. Each sounding profile was prepared by a geotechnical engineer based upon a technical review of the field penetration sounding logs. While the penetrations are representative of subsurface conditions at their respective locations and vertical reaches, local variations that are characteristic of the subsurface materials of the region, or that may be due to man-made alteration of the native geologic conditions, may be encountered. The soil profiles are shown in are described in the Appendix A, Figure 3.

ESTMATED STREAM ELEVATION

Subsequent to our initial December 4, 2018 report, Ardaman was requested to provide our best estimate of the elevation of the stream during our sampling. We consulted available river flow elevation data and provided our best estimate in Appendix D of this report.

CLOSURE

This report presents the results of Ardaman & Associates, Inc.'s Subsurface Soil Exploration, as described herein, and is intended for use by VHB. It was prepared in accordance with our agreement for consulting services.

This report was prepared based upon our judgment, related work experience and industry standards. Should any additional data become available, please provide the information for our review. We appreciate the opportunity to be of service on this project. Should you have any questions in regards to this report, or if we can be of any further assistance, please contact this office

Very truly yours,

ARDAMAN & ASSOCIATES, INC.

Florida Certificate of Authorization No. 00005950

Tonya Erbland, CIAQP
Senior Environmental Scientist

Martin E. Millburg, P.E.
Senior Geotechnical Engineer
Florida License No. 36584

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1 - File

Appendix A Figures 1 & 2 - Test Location Plans
Figure 3 - Soil Boring Profiles

Appendix B: Table 1 and Chemical Laboratory Results

Appendix C: Soils Lab Test Results

Appendix D: Stream Elevation Discussion

Appendix E: Field Testing Procedures

APPENDIX A

TEST LOCATION PLANS AND SOIL PROFILES

REFERENCE: GOOGLE EARTH PRO 2018

LEGEND

APPROXIMATE LOCATION OF BORING

0 250 500

APPROXIMATE SCALE: 1"=500'

TEST LOCATION PLAN

Ardaman & Associates, Inc.
Geotechnical, Environmental and Materials Consultants

WEEKI WACHEE SEDIMENT SAMPLING
WEEKI WACHEE, FLORIDA

DRAWN BY:	CHECKED BY:	DATE:
ajl	TEE	1/11/19
FILE NO. 18-55-9510	APPROVED BY: MEM	FIGURE: 1

1719.16:1

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DRZAL, ANDY

REFERENCE: GOOGLE EARTH PRO 2018

LEGEND

APPROXIMATE SAMPLE LOCATION

0 250 500

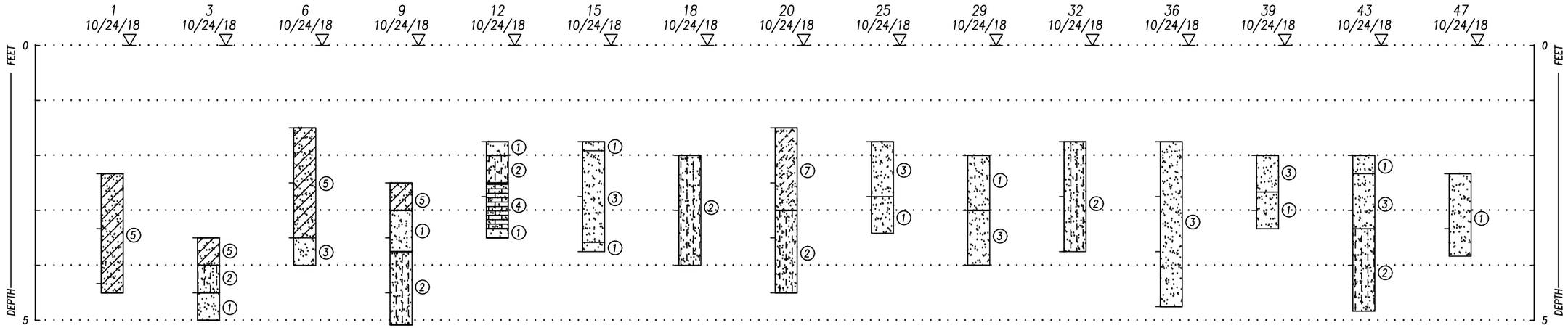
APPROXIMATE SCALE: 1"=500'

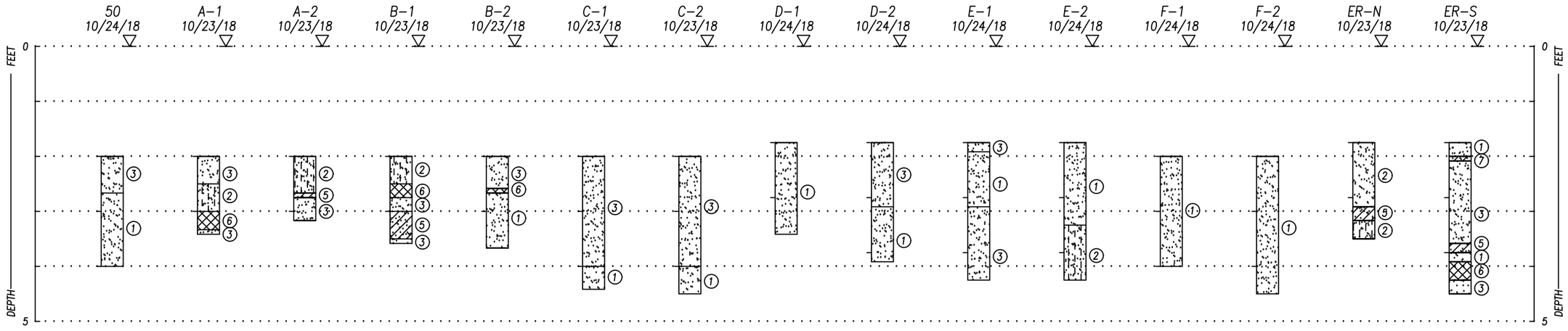
TEST LOCATION PLAN

Ardaman & Associates, Inc.
Geotechnical, Environmental and Materials Consultants

WEEKI WACHEE SEDIMENT SAMPLING
WEEKI WACHEE, FLORIDA

DRAWN BY:	CHECKED BY:	DATE:
ajd	TEE	1/11/19
FILE NO. 18-55-9510	APPROVED BY: MEM	FIGURE: 2





LEGEND

1. GRAY BROWN TO DARK GRAY BROWN FINE TO MEDIUM SAND (SP) WITH ORGANIC DEBRIS
2. GRAY BROWN FINE SAND WITH SHELL FRAGMENT, TRACE ORGANIC DEBRIS (SP–SM)
3. GRAY BROWN TO DARK GRAY BROWN FINE SAND (SP)
4. MIXED FINE SAND AND LIMESTONE WITH ORGANIC DEBRIS (SW)
5. BROWN CLAYEY FINE SAND (SC)
6. BROWN ORGANIC PEAT (PT)
7. BROWN SLIGHTLY CLAYEY FINE SAND (SP–SC)

PERFORMED BY: R.M./S.W./T.E.

(SP) UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) SYMBOL

BORING PROFILES

Ardaman & Associates, Inc.
Geotechnical, Environmental and Materials Consultants

WEEKI WACHEE SEDIMENT SAMPLING
WEEKI WACHEE, FLORIDA

DRAWN BY:	CHECKED BY:	DATE:
ajd	TEE	1/11/19
FILE NO.	APPROVED BY:	FIGURE:
18-55-9510	MEM	3

1719.16:1

G:\PROJECTS\2018\18-9510 VAB WEEKI WACHEE RIVER SAMPLING AND TESTING\CAD\18559510.DWG

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APPENDIX B

ANALYTICAL RESULTS SUMMARY TABLE & COMPLETE RESULTS

Project: **Weeki Wachee River** **Project No. 113-18-55-9510**

Client: **VHB** **Date: 12/4/2018**

ANALYTICAL TEST RESULTS

Sample ID	Date Collected	Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Percent Moisture	Selenium		Silver	
		mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/L	mg/kg	%	mg/L	mg/kg	mg/L	mg/kg
LeaGW					1600		7.5		38				2.1			5.2		17
sDEC			12		130000		1700		470		1400		17			11000		8200
sDER			2.1		120		82		210		400		3			440		410
1	10/24/2018	0.0071 U	**5.4**	**0.0068 I**	**1.0**	0.00033 U	**0.068**	0.0017 U	**11.3**	0.0046 U	**0.61**	0.00010 U	0.0063 U	**28.6**	0.0085 U	**0.51 I**	0.0010 U	0.15 U
12	10/24/2018	0.0071 U	**0.54 I**	**0.0064 I**	**0.94**	0.00033 U	**0.087**	**0.0019 I**	**2.8**	0.0046 U	**0.50 I**	0.00010 U	0.0059 U	**29.7**	0.0085 U	0.61 U	0.0010 U	0.20 U
15	10/24/2018	0.0071 U	0.38 U	**0.0058 I**	**0.44 I**	0.00033 U	0.038 U	**0.0021 I**	**0.93**	0.0046 U	0.38 U	0.00010 U	0.0041 U	**22.6**	0.0085 U	0.56 U	0.0010 U	0.19 U
18	10/24/2018	0.0071 U	0.30 U	**0.0047 I**	**0.36 I**	0.00033 U	0.030 U	0.0017 U	**0.59**	0.0046 U	0.30 U	0.00010 U	0.0044 U	**18.8**	0.0085 U	0.45 U	0.0010 U	0.15 U
20	10/24/2018	0.0071 U	0.30 U	**0.0024 I**	**0.52 I**	0.00033 U	0.030 U	**0.0038 I**	**0.77**	0.0046 U	0.30 U	0.00010 U	0.0044 U	**18.8**	0.0085 U	0.45 U	0.0010 U	0.15 U
25	10/24/2018	0.0071 U	0.29 U	**0.0028 I**	**0.59**	0.00033 U	0.029 U	**0.0039 I**	**0.99**	0.0046 U	0.29 U	0.00010 U	0.0053 U	**19.5**	0.0085 U	0.44 U	0.0010 U	0.15 U
29	10/24/2018	0.0071 U	0.37 U	**0.0039 I**	**0.54 I**	0.00033 U	0.037 U	0.0017 U	**0.96**	0.0046 U	0.37 U	0.00010 U	0.0054 U	**21.6**	0.0085 U	0.56 U	0.0010 U	0.19 U
3	10/24/2018	0.0071 U	**0.46 I**	**0.0044 I**	**1.2**	0.00033 U	**0.050 I**	0.0017 U	**2.0**	0.0046 U	**0.72 I**	0.00010 U	0.0051 U	**21.5**	0.0085 U	0.59 U	0.0010 U	0.20 U
32	10/24/2018	0.0071 U	0.32 U	**0.0038 I**	**0.45 I**	0.00033 U	0.032 U	0.0017 U	**0.61**	0.0046 U	0.32 U	0.00010 U	0.0049 U	**20.0**	0.0085 U	0.48 U	0.0010 U	0.16 U
36	10/24/2018	0.0071 U	0.29 U	**0.0036 I**	**0.36 I**	0.00033 U	0.029 U	0.0017 U	**0.65**	0.0046 U	0.29 U	0.00010 U	0.0043 U	**16.6**	0.0085 U	0.44 U	0.0010 U	0.15 U
39	10/24/2018	0.0071 U	0.31 U	**0.0055 I**	**1.1**	0.00033 U	**0.12**	0.0017 U	**2.6**	0.0046 U	**0.43 I**	0.00010 U	0.0045 U	**27.5**	0.0085 U	**0.84 I**	0.0010 U	0.15 U
43	10/24/2018	0.0071 U	0.36 U	**0.0046 I**	**0.60 I**	0.00033 U	0.036 U	0.0017 U	**1.0**	0.0046 U	0.36 U	0.00010 U	0.0045 U	**20.3**	0.0085 U	0.54 U	0.0010 U	0.18 U
47	10/24/2018	0.0071 U	**0.34 I**	**0.0034 I**	**0.60 I**	0.00033 U	0.032 U	0.0017 U	**0.84**	0.0046 U	0.32 U	0.00010 U	0.0044 U	**17.7**	0.0085 U	0.49 U	0.0010 U	0.16 U
50	10/24/2018	0.0071 U	0.34 U	**0.0016 I**	**0.61 I**	0.00033 U	0.034 U	**0.0038 I**	**1.4**	0.0046 U	0.34 U	0.00010 U	0.0062 U	**20.8**	0.0085 U	0.51 U	0.0010 U	0.17 U
6	10/24/2018	0.0071 U	**0.38 I**	**0.0043 I**	**0.56 I**	0.00033 U	**0.039 I**	**0.0020 I**	**1.5**	0.0046 U	**0.40 I**	0.00010 U	0.0061 U	**24.0**	0.0085 U	0.48 U	0.0010 U	0.16 U
9	10/24/2018	0.0071 U	0.35 U	**0.0012 I**	**0.50 I**	0.00033 U	0.035 U	0.0017 U	**1.2**	0.0046 U	0.35 U	0.00010 U	0.0051 U	**23.5**	0.0085 U	0.52 U	0.0010 U	0.17 U
A-1 (upstream)	10/23/2018	0.0071 U	0.42 U	**0.0058 I**	**1.6**	0.00033 U	**0.26**	**0.0036 I**	**4.2**	0.0046 U	**0.80 I**	0.00010 U	0.0067 U	**29.7**	0.0085 U	**1.5**	0.0010 U	0.21 U
A-2	10/23/2018	0.0071 U	0.33 U	**0.014**	**4.2**	0.00033 U	**0.15**	**0.010**	**6.8**	0.0046 U	**1.7**	**0.00022**	**0.069**	**25.7**	0.0085 U	**1.2**	0.0010 U	0.16 U
B-1 (upstream)	10/23/2018	0.0071 U		**0.0096 I**		0.00033 U		**0.022**		0.0046 U		0.00010 U	**0.015**	**26.9**	0.0085 U		0.0010 U	
B-2	10/23/2018	0.0071 U	0.29 U	**0.0020 I**	**0.73**	0.00033 U	**0.033 I**	**0.0018 I**	**2.0**	0.0046 U	0.29 U	0.00010 U	0.0048 U	**17.3**	0.0085 U	**0.64 I**	0.0010 U	0.15 U
C-1 (upstream)	10/23/2018	0.0071 U	0.30 U	**0.0029 I**	**0.68**	0.00033 U	**0.057 I**	0.0017 U	**1.9**	0.0046 U	**0.58 I**	0.00010 U	0.0049 U	**23.1**	0.0085 U	0.45 U	0.0010 U	0.15 U
C-2	10/23/2018	0.0071 U	0.35 U	**0.0030 I**	**0.82**	0.00033 U	**0.056 I**	0.0017 U	**2.0**	0.0046 U	**0.38 I**	0.00010 U	0.0046 U	**24.0**	0.0085 U	0.52 U	0.0010 U	0.17 U
D-1 (upstream)	10/24/2018	0.0071 U	0.37 U	**0.0029 I**	**1.1**	0.00033 U	**0.054 I**	0.0017 U	**2.1**	0.0046 U	**0.40 I**	0.00010 U	0.0049 U	**22.7**	0.0085 U	0.56 U	0.0010 U	0.19 U
D-2	10/24/2018	0.0071 U	0.33 U	**0.0023 I**	**0.64 I**	0.00033 U	0.033 U	0.0017 U	**1.2**	0.0046 U	0.33 U	0.00010 U	0.0058 U	**19.7**	0.0085 U	0.50 U	0.0010 U	0.17 U
E-1 (upstream)	10/24/2018	0.0071 U	0.34 U	**0.0023 I**	**0.87**	0.00033 U	**0.062 I**	0.0017 U	**2.4**	0.0046 U	0.34 U	0.00010 U	0.0057 U	**24.2**	0.0085 U	0.51 U	0.0010 U	0.17 U
E-2	10/24/2018	0.0071 U	0.32 U	**0.0020 I**	**0.76**	0.00033 U	**0.036 I**	0.0017 U	**1.6**	0.0046 U	0.32 U	0.00010 U	0.0047 U	**20.6**	0.0085 U	0.48 U	0.0010 U	0.16 U
ER-N	10/23/2018	0.0071 U	0.34 U	**0.0033 I**	**1.0**	0.00033 U	**0.078**	0.0017 U	**2.8**	0.0046 U	**0.45 I**	0.00010 U	0.0047 U	**20.2**	0.0085 U	0.51 U	0.0010 U	0.17 U
ER-S	10/23/2018	0.0071 U	**0.48 I**	**0.0049 I**	**4.4**	0.00033 U	**0.30**	**0.0022 I**	**6.5**	0.0046 U	**0.68 I**	0.00010 U	**0.027**	**29.0**	0.0085 U	**1.0 I**	0.0010 U	0.18 U
F-1 (upstream)	10/24/2018	0.0071 U	**0.41 I**	**0.0040 I**	**0.75**	0.00033 U	**0.042 I**	0.0017 U	**1.6**	0.0046 U	0.31 U	0.00010 U	0.0049 U	**24.1**	0.0085 U	0.47 U	0.0010 U	0.16 U
F-2	10/24/2018	0.0071 U	0.28 U	**0.0024 I**	**0.45 I**	0.00033 U	0.028 U	0.0017 U	**0.80**	0.0046 U	0.28 U	0.00010 U	0.0049 U	**20.2**	0.0085 U	0.42 U	0.0010 U	0.14 U

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

November 05, 2018

Tonya Erbland
Ardaman & Associates, Inc.
3925 Coconut Palm Drive
Suite 115
Tampa, FL 33619

RE: Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Dear Tonya Erbland:
Enclosed are the analytical results for sample(s) received by the laboratory on October 25, 2018. 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,

LA Palmer

Lori Palmer
lori.palmer@pacelabs.com
(813)881-9401
Project Manager

Enclosures

cc: Tonya Erbland, Ardaman & Associates, Inc.

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

CERTIFICATIONS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
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
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

SAMPLE SUMMARY

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35426322001	**C-1 (upstream)**	Solid	10/23/18 15:06	10/25/18 14:40
35426322002	**C-2 (downstream)**	Solid	10/23/18 15:13	10/25/18 14:40
35426322003	**A-1 (upstream)**	Solid	10/23/18 13:24	10/25/18 14:40
35426322004	**A-2 (downstream)**	Solid	10/23/18 13:35	10/25/18 14:40
35426322005	**B-1 (upstream)**	Solid	10/23/18 14:10	10/25/18 14:40
35426322006	**B-2 (downstream)**	Solid	10/23/18 14:06	10/25/18 14:40
35426322007	**ER-N (upstream)**	Solid	10/23/18 14:25	10/25/18 14:40
35426322008	**ER-S (downstream)**	Solid	10/23/18 14:36	10/25/18 14:40
35426322009	**D-1 (upstream)**	Solid	10/24/18 09:37	10/25/18 14:40
35426322010	**D-2 (downstream)**	Solid	10/24/18 09:43	10/25/18 14:40
35426322011	**E-1 (upstream)**	Solid	10/24/18 10:00	10/25/18 14:40
35426322012	**E-2 (downstream)**	Solid	10/24/18 10:05	10/25/18 14:40
35426322013	**F-1 (upstream)**	Solid	10/24/18 10:23	10/25/18 14:40
35426322014	**F-2 (downstream)**	Solid	10/24/18 10:27	10/25/18 14:40
35426322015	**50**	Solid	10/24/18 10:58	10/25/18 14:40
35426322016	**47**	Solid	10/24/18 11:12	10/25/18 14:40
35426322017	**43**	Solid	10/24/18 11:30	10/25/18 14:40
35426322018	**39**	Solid	10/24/18 11:44	10/25/18 14:40
35426322019	**36**	Solid	10/24/18 12:00	10/25/18 14:40
35426322020	**32**	Solid	10/24/18 12:13	10/25/18 14:40
35426322021	**29**	Solid	10/24/18 12:23	10/25/18 14:40
35426322022	**25**	Solid	10/24/18 12:38	10/25/18 14:40
35426322023	**20**	Solid	10/24/18 13:10	10/25/18 14:40
35426322024	**18**	Solid	10/24/18 13:26	10/25/18 14:40
35426322025	**15**	Solid	10/24/18 13:44	10/25/18 14:40
35426322026	**12**	Solid	10/24/18 14:00	10/25/18 14:40
35426322027	**9**	Solid	10/24/18 14:22	10/25/18 14:40
35426322028	**6**	Solid	10/24/18 14:36	10/25/18 14:40
35426322029	**3**	Solid	10/24/18 15:20	10/25/18 14:40
35426322030	**1**	Solid	10/24/18 16:00	10/25/18 14:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35426322001	**C-1 (upstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322002	**C-2 (downstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322003	**A-1 (upstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322004	**A-2 (downstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322005	**B-1 (upstream)**	EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322006	**B-2 (downstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322007	**ER-N (upstream)**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322008	**ER-S (downstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O

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SAMPLE ANALYTE COUNT

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322009	**D-1 (upstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322010	**D-2 (downstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322011	**E-1 (upstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322012	**E-2 (downstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322013	**F-1 (upstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322014	**F-2 (downstream)**	EPA 6010	LEC	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322015	**50**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O

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SAMPLE ANALYTE COUNT

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35426322016	**47**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322017	**43**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322018	**39**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322019	**36**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322020	**32**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322021	**29**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322022	**25**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322023	**20**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322024	**18**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322025	**15**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322026	**12**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322027	**9**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322028	**6**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322029	**3**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O
		ASTM D2974-87	NMP	1	PASI-O
35426322030	**1**	EPA 6010	SC1	7	PASI-O
		EPA 6010	SC1	7	PASI-O
		EPA 7470	AMS	1	PASI-O
		EPA 7471	AMS	1	PASI-O

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SAMPLE ANALYTE COUNT

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	NMP	1	PASI-O

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: C-1 (upstream) **Lab ID: 35426322001** Collected: 10/23/18 15:06 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.30 U**	mg/kg	0.60	0.30	1	10/30/18 16:23	10/31/18 10:21	7440-38-2	
Barium	**0.68**	mg/kg	0.60	0.30	1	10/30/18 16:23	10/31/18 10:21	7440-39-3	
Cadmium	**0.057 I**	mg/kg	0.060	0.030	1	10/30/18 16:23	10/31/18 10:21	7440-43-9	
Chromium	**1.9**	mg/kg	0.30	0.15	1	10/30/18 16:23	10/31/18 10:21	7440-47-3	
Lead	**0.58 I**	mg/kg	0.60	0.30	1	10/30/18 16:23	10/31/18 10:21	7439-92-1	
Selenium	**0.45 U**	mg/kg	0.90	0.45	1	10/30/18 16:23	10/31/18 10:21	7782-49-2	
Silver	**0.15 U**	mg/kg	0.30	0.15	1	10/30/18 16:23	10/31/18 10:21	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 17:48	7440-38-2	
Barium	**0.0029 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 17:48	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 17:48	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 17:48	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 17:48	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 17:48	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 17:48	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 12:48	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0049 U**	mg/kg	0.0098	0.0049	1	11/05/18 10:01	11/05/18 15:16	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.1**	%	0.10	0.10	1		11/05/18 10:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: C-2 (downstream) **Lab ID: 35426322002** Collected: 10/23/18 15:13 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.35 U**	mg/kg	0.70	0.35	1	10/30/18 16:23	10/31/18 10:24	7440-38-2	
Barium	**0.82**	mg/kg	0.70	0.35	1	10/30/18 16:23	10/31/18 10:24	7440-39-3	
Cadmium	**0.056 I**	mg/kg	0.070	0.035	1	10/30/18 16:23	10/31/18 10:24	7440-43-9	
Chromium	**2.0**	mg/kg	0.35	0.17	1	10/30/18 16:23	10/31/18 10:24	7440-47-3	
Lead	**0.38 I**	mg/kg	0.70	0.35	1	10/30/18 16:23	10/31/18 10:24	7439-92-1	
Selenium	**0.52 U**	mg/kg	1.0	0.52	1	10/30/18 16:23	10/31/18 10:24	7782-49-2	
Silver	**0.17 U**	mg/kg	0.35	0.17	1	10/30/18 16:23	10/31/18 10:24	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 17:59	7440-38-2	
Barium	**0.0030 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 17:59	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 17:59	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 17:59	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 17:59	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 17:59	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 17:59	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 12:50	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0046 U**	mg/kg	0.0092	0.0046	1	11/05/18 10:01	11/05/18 15:18	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.0**	%	0.10	0.10	1		11/05/18 10:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: A-1 (upstream) **Lab ID: 35426322003** Collected: 10/23/18 13:24 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.42 U**	mg/kg	0.85	0.42	1	10/30/18 16:23	10/31/18 10:27	7440-38-2	
Barium	**1.6**	mg/kg	0.85	0.42	1	10/30/18 16:23	10/31/18 10:27	7440-39-3	
Cadmium	**0.26**	mg/kg	0.085	0.042	1	10/30/18 16:23	10/31/18 10:27	7440-43-9	
Chromium	**4.2**	mg/kg	0.42	0.21	1	10/30/18 16:23	10/31/18 10:27	7440-47-3	
Lead	**0.80 I**	mg/kg	0.85	0.42	1	10/30/18 16:23	10/31/18 10:27	7439-92-1	
Selenium	**1.5**	mg/kg	1.3	0.64	1	10/30/18 16:23	10/31/18 10:27	7782-49-2	
Silver	**0.21 U**	mg/kg	0.42	0.21	1	10/30/18 16:23	10/31/18 10:27	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:08	7440-38-2	
Barium	**0.0058 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:08	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:08	7440-43-9	
Chromium	**0.0036 I**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:08	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:08	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:08	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:08	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 12:56	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0067 U**	mg/kg	0.013	0.0067	1	11/05/18 10:01	11/05/18 15:24	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**29.7**	%	0.10	0.10	1		11/05/18 10:25		

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: A-2 (downstream) **Lab ID: 35426322004** Collected: 10/23/18 13:35 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.33 U**	mg/kg	0.66	0.33	1	10/30/18 16:23	10/31/18 10:36	7440-38-2	
Barium	**4.2**	mg/kg	0.66	0.33	1	10/30/18 16:23	10/31/18 10:36	7440-39-3	
Cadmium	**0.15**	mg/kg	0.066	0.033	1	10/30/18 16:23	10/31/18 10:36	7440-43-9	
Chromium	**6.8**	mg/kg	0.33	0.16	1	10/30/18 16:23	10/31/18 10:36	7440-47-3	
Lead	**1.7**	mg/kg	0.66	0.33	1	10/30/18 16:23	10/31/18 10:36	7439-92-1	
Selenium	**1.2**	mg/kg	0.99	0.49	1	10/30/18 16:23	10/31/18 10:36	7782-49-2	
Silver	**0.16 U**	mg/kg	0.33	0.16	1	10/30/18 16:23	10/31/18 10:36	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:10	7440-38-2	
Barium	**0.014**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:10	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:10	7440-43-9	
Chromium	**0.010**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:10	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:10	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:10	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:10	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00022**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:01	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.069**	mg/kg	0.0093	0.0047	1	11/05/18 10:01	11/05/18 15:27	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**25.7**	%	0.10	0.10	1		11/05/18 10:26		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: B-1 (upstream) **Lab ID: 35426322005** Collected: 10/23/18 14:10 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:13	7440-38-2	
Barium	**0.0096 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:13	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:13	7440-43-9	
Chromium	**0.022**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:13	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:13	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:13	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:13	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:07	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.015**	mg/kg	0.012	0.0061	1	11/05/18 10:01	11/05/18 15:29	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.9**	%	0.10	0.10	1		11/05/18 10:26		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: B-2 (downstream) **Lab ID: 35426322006** Collected: 10/23/18 14:06 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.29 U**	mg/kg	0.58	0.29	1	10/30/18 16:23	10/31/18 10:42	7440-38-2	
Barium	**0.73**	mg/kg	0.58	0.29	1	10/30/18 16:23	10/31/18 10:42	7440-39-3	
Cadmium	**0.033 I**	mg/kg	0.058	0.029	1	10/30/18 16:23	10/31/18 10:42	7440-43-9	
Chromium	**2.0**	mg/kg	0.29	0.15	1	10/30/18 16:23	10/31/18 10:42	7440-47-3	
Lead	**0.29 U**	mg/kg	0.58	0.29	1	10/30/18 16:23	10/31/18 10:42	7439-92-1	
Selenium	**0.64 I**	mg/kg	0.87	0.44	1	10/30/18 16:23	10/31/18 10:42	7782-49-2	
Silver	**0.15 U**	mg/kg	0.29	0.15	1	10/30/18 16:23	10/31/18 10:42	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:16	7440-38-2	
Barium	**0.0020 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:16	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:16	7440-43-9	
Chromium	**0.0018 I**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:16	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:16	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:16	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:16	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:09	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0048 U**	mg/kg	0.0095	0.0048	1	11/05/18 10:01	11/05/18 15:31	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.3**	%	0.10	0.10	1		11/05/18 10:26		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: ER-N (upstream) **Lab ID: 35426322007** Collected: 10/23/18 14:25 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.34 U**	mg/kg	0.68	0.34	1	10/30/18 16:23	10/31/18 10:45	7440-38-2	
Barium	**1.0**	mg/kg	0.68	0.34	1	10/30/18 16:23	10/31/18 10:45	7440-39-3	
Cadmium	**0.078**	mg/kg	0.068	0.034	1	10/30/18 16:23	10/31/18 10:45	7440-43-9	
Chromium	**2.8**	mg/kg	0.34	0.17	1	10/30/18 16:23	10/31/18 10:45	7440-47-3	
Lead	**0.45 I**	mg/kg	0.68	0.34	1	10/30/18 16:23	10/31/18 10:45	7439-92-1	
Selenium	**0.51 U**	mg/kg	1.0	0.51	1	10/30/18 16:23	10/31/18 10:45	7782-49-2	
Silver	**0.17 U**	mg/kg	0.34	0.17	1	10/30/18 16:23	10/31/18 10:45	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:19	7440-38-2	
Barium	**0.0033 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:19	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:19	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:19	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:19	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:19	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:19	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:11	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0047 U**	mg/kg	0.0095	0.0047	1	11/05/18 10:01	11/05/18 15:33	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.2**	%	0.10	0.10	1		11/05/18 10:26		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: ER-S (downstream) **Lab ID: 35426322008** Collected: 10/23/18 14:36 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.48 I**	mg/kg	0.74	0.37	1	11/01/18 17:21	11/02/18 17:19	7440-38-2	J(R1)
Barium	**4.4**	mg/kg	0.74	0.37	1	11/01/18 17:21	11/02/18 17:19	7440-39-3	J(R1)
Cadmium	**0.30**	mg/kg	0.074	0.037	1	11/01/18 17:21	11/02/18 17:19	7440-43-9	J(R1)
Chromium	**6.5**	mg/kg	0.37	0.18	1	11/01/18 17:21	11/02/18 17:19	7440-47-3	J(R1)
Lead	**0.68 I**	mg/kg	0.74	0.37	1	11/01/18 17:21	11/02/18 17:19	7439-92-1	J(R1)
Selenium	**1.0 I**	mg/kg	1.1	0.55	1	11/01/18 17:21	11/02/18 17:19	7782-49-2	J(R1)
Silver	**0.18 U**	mg/kg	0.37	0.18	1	11/01/18 17:21	11/02/18 17:19	7440-22-4	J(R1)
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:22	7440-38-2	
Barium	**0.0049 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:22	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:22	7440-43-9	
Chromium	**0.0022 I**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:22	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:22	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:22	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:22	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:13	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.027**	mg/kg	0.012	0.0062	1	11/05/18 10:01	11/05/18 15:35	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**29.0**	%	0.10	0.10	1		11/05/18 10:26		J(D6)

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: D-1 (upstream) **Lab ID: 35426322009** Collected: 10/24/18 09:37 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.37 U**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 17:42	7440-38-2	
Barium	**1.1**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 17:42	7440-39-3	
Cadmium	**0.054 I**	mg/kg	0.075	0.037	1	11/01/18 17:21	11/02/18 17:42	7440-43-9	
Chromium	**2.1**	mg/kg	0.37	0.19	1	11/01/18 17:21	11/02/18 17:42	7440-47-3	
Lead	**0.40 I**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 17:42	7439-92-1	
Selenium	**0.56 U**	mg/kg	1.1	0.56	1	11/01/18 17:21	11/02/18 17:42	7782-49-2	
Silver	**0.19 U**	mg/kg	0.37	0.19	1	11/01/18 17:21	11/02/18 17:42	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:20	11/02/18 18:25	7440-38-2	
Barium	**0.0029 I**	mg/L	0.010	0.00084	1	11/01/18 08:20	11/02/18 18:25	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:20	11/02/18 18:25	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:20	11/02/18 18:25	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:20	11/02/18 18:25	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:20	11/02/18 18:25	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:20	11/02/18 18:25	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:16	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0049 U**	mg/kg	0.0097	0.0049	1	11/05/18 10:01	11/05/18 15:37	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.7**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: D-2 (downstream) **Lab ID: 35426322010** Collected: 10/24/18 09:43 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.33 U**	mg/kg	0.66	0.33	1	11/01/18 17:21	11/02/18 17:45	7440-38-2	
Barium	**0.64 I**	mg/kg	0.66	0.33	1	11/01/18 17:21	11/02/18 17:45	7440-39-3	
Cadmium	**0.033 U**	mg/kg	0.066	0.033	1	11/01/18 17:21	11/02/18 17:45	7440-43-9	
Chromium	**1.2**	mg/kg	0.33	0.17	1	11/01/18 17:21	11/02/18 17:45	7440-47-3	
Lead	**0.33 U**	mg/kg	0.66	0.33	1	11/01/18 17:21	11/02/18 17:45	7439-92-1	
Selenium	**0.50 U**	mg/kg	1.0	0.50	1	11/01/18 17:21	11/02/18 17:45	7782-49-2	
Silver	**0.17 U**	mg/kg	0.33	0.17	1	11/01/18 17:21	11/02/18 17:45	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 18:33	7440-38-2	
Barium	**0.0023 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 18:33	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 18:33	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 18:33	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 18:33	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 18:33	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 18:33	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:20	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0058 U**	mg/kg	0.012	0.0058	1	11/05/18 10:01	11/05/18 15:39	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.7**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: E-1 (upstream) **Lab ID: 35426322011** Collected: 10/24/18 10:00 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.34 U**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 17:48	7440-38-2	
Barium	**0.87**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 17:48	7440-39-3	
Cadmium	**0.062 I**	mg/kg	0.068	0.034	1	11/01/18 17:21	11/02/18 17:48	7440-43-9	
Chromium	**2.4**	mg/kg	0.34	0.17	1	11/01/18 17:21	11/02/18 17:48	7440-47-3	
Lead	**0.34 U**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 17:48	7439-92-1	
Selenium	**0.51 U**	mg/kg	1.0	0.51	1	11/01/18 17:21	11/02/18 17:48	7782-49-2	
Silver	**0.17 U**	mg/kg	0.34	0.17	1	11/01/18 17:21	11/02/18 17:48	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 18:50	7440-38-2	
Barium	**0.0023 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 18:50	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 18:50	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 18:50	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 18:50	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 18:50	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 18:50	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:22	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0057 U**	mg/kg	0.011	0.0057	1	11/05/18 10:01	11/05/18 15:41	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.2**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: E-2 (downstream) **Lab ID: 35426322012** Collected: 10/24/18 10:05 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.32 U**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 17:51	7440-38-2	
Barium	**0.76**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 17:51	7440-39-3	
Cadmium	**0.036 I**	mg/kg	0.064	0.032	1	11/01/18 17:21	11/02/18 17:51	7440-43-9	
Chromium	**1.6**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 17:51	7440-47-3	
Lead	**0.32 U**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 17:51	7439-92-1	
Selenium	**0.48 U**	mg/kg	0.97	0.48	1	11/01/18 17:21	11/02/18 17:51	7782-49-2	
Silver	**0.16 U**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 17:51	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 18:53	7440-38-2	
Barium	**0.0020 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 18:53	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 18:53	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 18:53	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 18:53	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 18:53	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 18:53	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:33	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0047 U**	mg/kg	0.0094	0.0047	1	11/05/18 10:01	11/05/18 15:44	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.6**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: F-1 (upstream) **Lab ID: 35426322013** Collected: 10/24/18 10:23 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.41 I**	mg/kg	0.63	0.31	1	11/01/18 17:21	11/02/18 17:54	7440-38-2	
Barium	**0.75**	mg/kg	0.63	0.31	1	11/01/18 17:21	11/02/18 17:54	7440-39-3	
Cadmium	**0.042 I**	mg/kg	0.063	0.031	1	11/01/18 17:21	11/02/18 17:54	7440-43-9	
Chromium	**1.6**	mg/kg	0.31	0.16	1	11/01/18 17:21	11/02/18 17:54	7440-47-3	
Lead	**0.31 U**	mg/kg	0.63	0.31	1	11/01/18 17:21	11/02/18 17:54	7439-92-1	
Selenium	**0.47 U**	mg/kg	0.94	0.47	1	11/01/18 17:21	11/02/18 17:54	7782-49-2	
Silver	**0.16 U**	mg/kg	0.31	0.16	1	11/01/18 17:21	11/02/18 17:54	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 18:56	7440-38-2	
Barium	**0.0040 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 18:56	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 18:56	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 18:56	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 18:56	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 18:56	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 18:56	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:37	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0049 U**	mg/kg	0.0097	0.0049	1	11/05/18 10:01	11/05/18 15:50	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.1**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: F-2 (downstream) **Lab ID: 35426322014** Collected: 10/24/18 10:27 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.28 U**	mg/kg	0.56	0.28	1	11/01/18 17:21	11/02/18 17:57	7440-38-2	
Barium	**0.45 I**	mg/kg	0.56	0.28	1	11/01/18 17:21	11/02/18 17:57	7440-39-3	
Cadmium	**0.028 U**	mg/kg	0.056	0.028	1	11/01/18 17:21	11/02/18 17:57	7440-43-9	
Chromium	**0.80**	mg/kg	0.28	0.14	1	11/01/18 17:21	11/02/18 17:57	7440-47-3	
Lead	**0.28 U**	mg/kg	0.56	0.28	1	11/01/18 17:21	11/02/18 17:57	7439-92-1	
Selenium	**0.42 U**	mg/kg	0.84	0.42	1	11/01/18 17:21	11/02/18 17:57	7782-49-2	
Silver	**0.14 U**	mg/kg	0.28	0.14	1	11/01/18 17:21	11/02/18 17:57	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 18:59	7440-38-2	
Barium	**0.0024 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 18:59	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 18:59	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 18:59	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 18:59	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 18:59	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 18:59	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:39	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0049 U**	mg/kg	0.0098	0.0049	1	11/05/18 10:01	11/05/18 15:52	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.2**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 50 **Lab ID: 35426322015** Collected: 10/24/18 10:58 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.34 U**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 18:05	7440-38-2	
Barium	**0.61 I**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 18:05	7440-39-3	
Cadmium	**0.034 U**	mg/kg	0.068	0.034	1	11/01/18 17:21	11/02/18 18:05	7440-43-9	
Chromium	**1.4**	mg/kg	0.34	0.17	1	11/01/18 17:21	11/02/18 18:05	7440-47-3	
Lead	**0.34 U**	mg/kg	0.68	0.34	1	11/01/18 17:21	11/02/18 18:05	7439-92-1	
Selenium	**0.51 U**	mg/kg	1.0	0.51	1	11/01/18 17:21	11/02/18 18:05	7782-49-2	
Silver	**0.17 U**	mg/kg	0.34	0.17	1	11/01/18 17:21	11/02/18 18:05	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 19:02	7440-38-2	
Barium	**0.0016 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 19:02	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 19:02	7440-43-9	
Chromium	**0.0038 I**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 19:02	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 19:02	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 19:02	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 19:02	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:41	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0062 U**	mg/kg	0.012	0.0062	1	11/05/18 10:01	11/05/18 15:54	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.8**	%	0.10	0.10	1		11/05/18 10:27		

REPORT OF LABORATORY ANALYSIS

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Oldsmar , FL 34677
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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 47 **Lab ID: 35426322016** Collected: 10/24/18 11:12 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.34 I**	mg/kg	0.65	0.32	1	11/01/18 17:21	11/02/18 18:08	7440-38-2	
Barium	**0.60 I**	mg/kg	0.65	0.32	1	11/01/18 17:21	11/02/18 18:08	7440-39-3	
Cadmium	**0.032 U**	mg/kg	0.065	0.032	1	11/01/18 17:21	11/02/18 18:08	7440-43-9	
Chromium	**0.84**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 18:08	7440-47-3	
Lead	**0.32 U**	mg/kg	0.65	0.32	1	11/01/18 17:21	11/02/18 18:08	7439-92-1	
Selenium	**0.49 U**	mg/kg	0.97	0.49	1	11/01/18 17:21	11/02/18 18:08	7782-49-2	
Silver	**0.16 U**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 18:08	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 19:05	7440-38-2	
Barium	**0.0034 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 19:05	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 19:05	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 19:05	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 19:05	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 19:05	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 19:05	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:43	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0044 U**	mg/kg	0.0087	0.0044	1	11/05/18 09:50	11/05/18 16:09	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.7**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 43 **Lab ID: 35426322017** Collected: 10/24/18 11:30 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.36 U**	mg/kg	0.71	0.36	1	11/01/18 17:21	11/02/18 18:11	7440-38-2	
Barium	**0.60 I**	mg/kg	0.71	0.36	1	11/01/18 17:21	11/02/18 18:11	7440-39-3	
Cadmium	**0.036 U**	mg/kg	0.071	0.036	1	11/01/18 17:21	11/02/18 18:11	7440-43-9	
Chromium	**1.0**	mg/kg	0.36	0.18	1	11/01/18 17:21	11/02/18 18:11	7440-47-3	
Lead	**0.36 U**	mg/kg	0.71	0.36	1	11/01/18 17:21	11/02/18 18:11	7439-92-1	
Selenium	**0.54 U**	mg/kg	1.1	0.54	1	11/01/18 17:21	11/02/18 18:11	7782-49-2	
Silver	**0.18 U**	mg/kg	0.36	0.18	1	11/01/18 17:21	11/02/18 18:11	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 19:08	7440-38-2	
Barium	**0.0046 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 19:08	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 19:08	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 19:08	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 19:08	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 19:08	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 19:08	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:45	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0045 U**	mg/kg	0.0090	0.0045	1	11/05/18 09:50	11/05/18 16:20	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.3**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

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110 South Bayview Blvd.
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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 39 **Lab ID: 35426322018** Collected: 10/24/18 11:44 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.31 U**	mg/kg	0.62	0.31	1	11/01/18 17:21	11/02/18 18:14	7440-38-2	
Barium	**1.1**	mg/kg	0.62	0.31	1	11/01/18 17:21	11/02/18 18:14	7440-39-3	
Cadmium	**0.12**	mg/kg	0.062	0.031	1	11/01/18 17:21	11/02/18 18:14	7440-43-9	
Chromium	**2.6**	mg/kg	0.31	0.15	1	11/01/18 17:21	11/02/18 18:14	7440-47-3	
Lead	**0.43 I**	mg/kg	0.62	0.31	1	11/01/18 17:21	11/02/18 18:14	7439-92-1	V
Selenium	**0.84 I**	mg/kg	0.93	0.46	1	11/01/18 17:21	11/02/18 18:14	7782-49-2	
Silver	**0.15 U**	mg/kg	0.31	0.15	1	11/01/18 17:21	11/02/18 18:14	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 19:16	7440-38-2	
Barium	**0.0055 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 19:16	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 19:16	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 19:16	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 19:16	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 19:16	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 19:16	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:48	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0045 U**	mg/kg	0.0090	0.0045	1	11/05/18 09:50	11/05/18 16:24	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.5**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 36 **Lab ID: 35426322019** Collected: 10/24/18 12:00 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.29 U**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:17	7440-38-2	
Barium	**0.36 I**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:17	7440-39-3	
Cadmium	**0.029 U**	mg/kg	0.058	0.029	1	11/01/18 17:21	11/02/18 18:17	7440-43-9	
Chromium	**0.65**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 18:17	7440-47-3	
Lead	**0.29 U**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:17	7439-92-1	
Selenium	**0.44 U**	mg/kg	0.87	0.44	1	11/01/18 17:21	11/02/18 18:17	7782-49-2	
Silver	**0.15 U**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 18:17	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 08:24	11/02/18 19:19	7440-38-2	
Barium	**0.0036 I**	mg/L	0.010	0.00084	1	11/01/18 08:24	11/02/18 19:19	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 08:24	11/02/18 19:19	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 08:24	11/02/18 19:19	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 08:24	11/02/18 19:19	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 08:24	11/02/18 19:19	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 08:24	11/02/18 19:19	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/30/18 16:00 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:49	11/05/18 13:50	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0043 U**	mg/kg	0.0087	0.0043	1	11/05/18 09:50	11/05/18 16:26	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.6**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 32 **Lab ID: 35426322020** Collected: 10/24/18 12:13 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.32 U**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 18:20	7440-38-2	
Barium	**0.45 I**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 18:20	7440-39-3	
Cadmium	**0.032 U**	mg/kg	0.064	0.032	1	11/01/18 17:21	11/02/18 18:20	7440-43-9	
Chromium	**0.61**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 18:20	7440-47-3	
Lead	**0.32 U**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 18:20	7439-92-1	
Selenium	**0.48 U**	mg/kg	0.96	0.48	1	11/01/18 17:21	11/02/18 18:20	7782-49-2	
Silver	**0.16 U**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 18:20	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 5								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:10	7440-38-2	
Barium	**0.0038 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:10	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:10	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:10	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:10	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:10	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:10	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 5								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:07	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0049 U**	mg/kg	0.0098	0.0049	1	11/05/18 09:50	11/05/18 16:28	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.0**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 29 **Lab ID: 35426322021** Collected: 10/24/18 12:23 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.37 U**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 18:22	7440-38-2	
Barium	**0.54 I**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 18:22	7440-39-3	
Cadmium	**0.037 U**	mg/kg	0.075	0.037	1	11/01/18 17:21	11/02/18 18:22	7440-43-9	
Chromium	**0.96**	mg/kg	0.37	0.19	1	11/01/18 17:21	11/02/18 18:22	7440-47-3	
Lead	**0.37 U**	mg/kg	0.75	0.37	1	11/01/18 17:21	11/02/18 18:22	7439-92-1	
Selenium	**0.56 U**	mg/kg	1.1	0.56	1	11/01/18 17:21	11/02/18 18:22	7782-49-2	
Silver	**0.19 U**	mg/kg	0.37	0.19	1	11/01/18 17:21	11/02/18 18:22	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:28	7440-38-2	
Barium	**0.0039 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:28	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:28	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:28	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:28	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:28	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:28	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:09	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0054 U**	mg/kg	0.011	0.0054	1	11/05/18 09:50	11/05/18 16:30	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.6**	%	0.10	0.10	1		11/05/18 10:28		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 25 **Lab ID: 35426322022** Collected: 10/24/18 12:38 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.29 U**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:25	7440-38-2	
Barium	**0.59**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:25	7440-39-3	
Cadmium	**0.029 U**	mg/kg	0.058	0.029	1	11/01/18 17:21	11/02/18 18:25	7440-43-9	
Chromium	**0.99**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 18:25	7440-47-3	
Lead	**0.29 U**	mg/kg	0.58	0.29	1	11/01/18 17:21	11/02/18 18:25	7439-92-1	
Selenium	**0.44 U**	mg/kg	0.87	0.44	1	11/01/18 17:21	11/02/18 18:25	7782-49-2	
Silver	**0.15 U**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 18:25	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 8								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:31	7440-38-2	
Barium	**0.0028 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:31	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:31	7440-43-9	
Chromium	**0.0039 I**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:31	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:31	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:31	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:31	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 8								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:15	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0053 U**	mg/kg	0.011	0.0053	1	11/05/18 09:50	11/05/18 16:33	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.5**	%	0.10	0.10	1		11/05/18 10:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 20 **Lab ID: 35426322023** Collected: 10/24/18 13:10 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.30 U**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 18:28	7440-38-2	
Barium	**0.52 I**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 18:28	7440-39-3	
Cadmium	**0.030 U**	mg/kg	0.059	0.030	1	11/01/18 17:21	11/02/18 18:28	7440-43-9	
Chromium	**0.77**	mg/kg	0.30	0.15	1	11/01/18 17:21	11/02/18 18:28	7440-47-3	
Lead	**0.30 U**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 18:28	7439-92-1	
Selenium	**0.45 U**	mg/kg	0.89	0.45	1	11/01/18 17:21	11/02/18 18:28	7782-49-2	
Silver	**0.15 U**	mg/kg	0.30	0.15	1	11/01/18 17:21	11/02/18 18:28	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:33	7440-38-2	
Barium	**0.0024 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:33	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:33	7440-43-9	
Chromium	**0.0038 I**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:33	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:33	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:33	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:33	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:20	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0044 U**	mg/kg	0.0088	0.0044	1	11/05/18 09:50	11/05/18 16:35	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.8**	%	0.10	0.10	1		11/05/18 10:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 18 **Lab ID: 35426322024** Collected: 10/24/18 13:26 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.30 U**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 21:13	7440-38-2	
Barium	**0.36 I**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 21:13	7440-39-3	
Cadmium	**0.030 U**	mg/kg	0.059	0.030	1	11/01/18 17:21	11/02/18 21:13	7440-43-9	
Chromium	**0.59**	mg/kg	0.30	0.15	1	11/01/18 17:21	11/02/18 21:13	7440-47-3	
Lead	**0.30 U**	mg/kg	0.59	0.30	1	11/01/18 17:21	11/02/18 21:13	7439-92-1	
Selenium	**0.45 U**	mg/kg	0.89	0.45	1	11/01/18 17:21	11/02/18 21:13	7782-49-2	
Silver	**0.15 U**	mg/kg	0.30	0.15	1	11/01/18 17:21	11/02/18 21:13	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:36	7440-38-2	
Barium	**0.0047 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:36	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:36	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:36	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:36	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:36	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:36	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:22	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0044 U**	mg/kg	0.0087	0.0044	1	11/05/18 09:50	11/05/18 16:37	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.8**	%	0.10	0.10	1		11/05/18 10:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 15 **Lab ID: 35426322025** Collected: 10/24/18 13:44 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.38 U**	mg/kg	0.75	0.38	1	11/01/18 17:21	11/02/18 21:25	7440-38-2	
Barium	**0.44 I**	mg/kg	0.75	0.38	1	11/01/18 17:21	11/02/18 21:25	7440-39-3	
Cadmium	**0.038 U**	mg/kg	0.075	0.038	1	11/01/18 17:21	11/02/18 21:25	7440-43-9	
Chromium	**0.93**	mg/kg	0.38	0.19	1	11/01/18 17:21	11/02/18 21:25	7440-47-3	
Lead	**0.38 U**	mg/kg	0.75	0.38	1	11/01/18 17:21	11/02/18 21:25	7439-92-1	
Selenium	**0.56 U**	mg/kg	1.1	0.56	1	11/01/18 17:21	11/02/18 21:25	7782-49-2	
Silver	**0.19 U**	mg/kg	0.38	0.19	1	11/01/18 17:21	11/02/18 21:25	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:39	7440-38-2	
Barium	**0.0058 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:39	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:39	7440-43-9	
Chromium	**0.0021 I**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:39	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:39	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:39	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:39	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:24	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0041 U**	mg/kg	0.0083	0.0041	1	11/05/18 09:50	11/05/18 16:39	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.6**	%	0.10	0.10	1		11/05/18 10:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 12 **Lab ID: 35426322026** Collected: 10/24/18 14:00 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.54 I**	mg/kg	0.82	0.41	1	11/01/18 17:21	11/02/18 21:33	7440-38-2	
Barium	**0.94**	mg/kg	0.82	0.41	1	11/01/18 17:21	11/02/18 21:33	7440-39-3	
Cadmium	**0.087**	mg/kg	0.082	0.041	1	11/01/18 17:21	11/02/18 21:33	7440-43-9	
Chromium	**2.8**	mg/kg	0.41	0.20	1	11/01/18 17:21	11/02/18 21:33	7440-47-3	
Lead	**0.50 I**	mg/kg	0.82	0.41	1	11/01/18 17:21	11/02/18 21:33	7439-92-1	
Selenium	**0.61 U**	mg/kg	1.2	0.61	1	11/01/18 17:21	11/02/18 21:33	7782-49-2	
Silver	**0.20 U**	mg/kg	0.41	0.20	1	11/01/18 17:21	11/02/18 21:33	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:42	7440-38-2	
Barium	**0.0064 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:42	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:42	7440-43-9	
Chromium	**0.0019 I**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:42	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:42	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:42	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:42	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:30	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0059 U**	mg/kg	0.012	0.0059	1	11/05/18 09:50	11/05/18 16:45	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**29.7**	%	0.10	0.10	1		11/05/18 10:29		J(D6)

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 9 **Lab ID: 35426322027** Collected: 10/24/18 14:22 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.35 U**	mg/kg	0.69	0.35	1	11/01/18 17:21	11/02/18 21:36	7440-38-2	
Barium	**0.50 I**	mg/kg	0.69	0.35	1	11/01/18 17:21	11/02/18 21:36	7440-39-3	
Cadmium	**0.035 U**	mg/kg	0.069	0.035	1	11/01/18 17:21	11/02/18 21:36	7440-43-9	
Chromium	**1.2**	mg/kg	0.35	0.17	1	11/01/18 17:21	11/02/18 21:36	7440-47-3	
Lead	**0.35 U**	mg/kg	0.69	0.35	1	11/01/18 17:21	11/02/18 21:36	7439-92-1	
Selenium	**0.52 U**	mg/kg	1.0	0.52	1	11/01/18 17:21	11/02/18 21:36	7782-49-2	
Silver	**0.17 U**	mg/kg	0.35	0.17	1	11/01/18 17:21	11/02/18 21:36	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:45	7440-38-2	
Barium	**0.0012 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:45	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:45	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:45	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:45	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:45	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:45	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:32	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0051 U**	mg/kg	0.010	0.0051	1	11/05/18 09:50	11/05/18 16:48	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.5**	%	0.10	0.10	1		11/05/18 10:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 6 **Lab ID: 35426322028** Collected: 10/24/18 14:36 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.38 I**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 21:39	7440-38-2	
Barium	**0.56 I**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 21:39	7440-39-3	
Cadmium	**0.039 I**	mg/kg	0.064	0.032	1	11/01/18 17:21	11/02/18 21:39	7440-43-9	
Chromium	**1.5**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 21:39	7440-47-3	
Lead	**0.40 I**	mg/kg	0.64	0.32	1	11/01/18 17:21	11/02/18 21:39	7439-92-1	
Selenium	**0.48 U**	mg/kg	0.97	0.48	1	11/01/18 17:21	11/02/18 21:39	7782-49-2	
Silver	**0.16 U**	mg/kg	0.32	0.16	1	11/01/18 17:21	11/02/18 21:39	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 8								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:48	7440-38-2	
Barium	**0.0043 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:48	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:48	7440-43-9	
Chromium	**0.0020 I**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:48	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:48	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:48	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:48	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 8								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:34	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0061 U**	mg/kg	0.012	0.0061	1	11/05/18 09:50	11/05/18 16:50	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.0**	%	0.10	0.10	1		11/05/18 10:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 3 **Lab ID: 35426322029** Collected: 10/24/18 15:20 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**0.46 I**	mg/kg	0.79	0.40	1	11/01/18 17:21	11/02/18 21:42	7440-38-2	
Barium	**1.2**	mg/kg	0.79	0.40	1	11/01/18 17:21	11/02/18 21:42	7440-39-3	
Cadmium	**0.050 I**	mg/kg	0.079	0.040	1	11/01/18 17:21	11/02/18 21:42	7440-43-9	
Chromium	**2.0**	mg/kg	0.40	0.20	1	11/01/18 17:21	11/02/18 21:42	7440-47-3	
Lead	**0.72 I**	mg/kg	0.79	0.40	1	11/01/18 17:21	11/02/18 21:42	7439-92-1	
Selenium	**0.59 U**	mg/kg	1.2	0.59	1	11/01/18 17:21	11/02/18 21:42	7782-49-2	
Silver	**0.20 U**	mg/kg	0.40	0.20	1	11/01/18 17:21	11/02/18 21:42	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:51	7440-38-2	
Barium	**0.0044 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:51	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:51	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:51	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:51	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:51	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:51	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:37	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0051 U**	mg/kg	0.010	0.0051	1	11/05/18 09:50	11/05/18 16:52	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.5**	%	0.10	0.10	1		11/05/18 10:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Sample: 1 **Lab ID: 35426322030** Collected: 10/24/18 16:00 Received: 10/25/18 14:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**5.4**	mg/kg	0.59	0.29	1	11/01/18 17:21	11/02/18 21:45	7440-38-2	
Barium	**1.0**	mg/kg	0.59	0.29	1	11/01/18 17:21	11/02/18 21:45	7440-39-3	
Cadmium	**0.068**	mg/kg	0.059	0.029	1	11/01/18 17:21	11/02/18 21:45	7440-43-9	
Chromium	**11.3**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 21:45	7440-47-3	
Lead	**0.61**	mg/kg	0.59	0.29	1	11/01/18 17:21	11/02/18 21:45	7439-92-1	
Selenium	**0.51 I**	mg/kg	0.88	0.44	1	11/01/18 17:21	11/02/18 21:45	7782-49-2	
Silver	**0.15 U**	mg/kg	0.29	0.15	1	11/01/18 17:21	11/02/18 21:45	7440-22-4	
6010 MET ICP, SPLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Arsenic	**0.0071 U**	mg/L	0.010	0.0071	1	11/01/18 14:11	11/02/18 10:59	7440-38-2	
Barium	**0.0068 I**	mg/L	0.010	0.00084	1	11/01/18 14:11	11/02/18 10:59	7440-39-3	
Cadmium	**0.00033 U**	mg/L	0.0010	0.00033	1	11/01/18 14:11	11/02/18 10:59	7440-43-9	
Chromium	**0.0017 U**	mg/L	0.0050	0.0017	1	11/01/18 14:11	11/02/18 10:59	7440-47-3	
Lead	**0.0046 U**	mg/L	0.010	0.0046	1	11/01/18 14:11	11/02/18 10:59	7439-92-1	
Selenium	**0.0085 U**	mg/L	0.015	0.0085	1	11/01/18 14:11	11/02/18 10:59	7782-49-2	
Silver	**0.0010 U**	mg/L	0.0050	0.0010	1	11/01/18 14:11	11/02/18 10:59	7440-22-4	
7470 Mercury, SPLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1312; 10/31/18 15:02 Initial pH: ; Final pH: 7								
Mercury	**0.00010 U**	mg/L	0.00020	0.00010	1	11/02/18 11:43	11/05/18 14:39	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.0063 U**	mg/kg	0.013	0.0063	1	11/05/18 09:50	11/05/18 16:54	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**28.6**	%	0.10	0.10	1		11/05/18 10:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490359 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury SPLP
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009

METHOD BLANK: 2647118 Matrix: Water
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00010 U	0.00020	0.00010	11/05/18 12:44	

LABORATORY CONTROL SAMPLE: 2651928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0020	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651929 2651930

Parameter	Units	35426322002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00010 U	.002	.002	0.0020	0.0020	102	98	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

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490360 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury SPLP
Associated Lab Samples: 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019

METHOD BLANK: 2655627 Matrix: Water
Associated Lab Samples: 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00010 U	0.00020	0.00010	11/05/18 13:56	

LABORATORY CONTROL SAMPLE: 2651932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0020	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651933 2651934

Parameter	Units	35426322011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00010 U	.002	.002	0.0020	0.0020	100	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490361 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury SPLP
Associated Lab Samples: 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

METHOD BLANK: 2649084 Matrix: Water
Associated Lab Samples: 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00010 U	0.00020	0.00010	11/05/18 13:58	

LABORATORY CONTROL SAMPLE: 2651936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0021	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651937 2651938

Parameter	Units	35426322021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00010 U	.002	.002	0.0020	0.0020	102	100	75-125	2	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490515 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009, 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015

METHOD BLANK: 2652922 Matrix: Solid
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009, 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	0.0035 U	0.0070	0.0035	11/05/18 14:59	

LABORATORY CONTROL SAMPLE: 2652923

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.09	0.091	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2652924 2652925

Parameter	Units	35425318001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.0052 U	.086	.11	0.090	0.11	105	106	80-120	22	20	J(R1)

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490518 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 35426322016, 35426322017, 35426322018, 35426322019, 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

METHOD BLANK: 2652927 Matrix: Solid
Associated Lab Samples: 35426322016, 35426322017, 35426322018, 35426322019, 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	0.0043 U	0.0086	0.0043	11/05/18 16:05	

LABORATORY CONTROL SAMPLE: 2652928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.093	0.089	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2652929 2652930

Parameter	Units	35426322016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.0044 U	.098	.11	0.092	0.11	94	98	80-120	14	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 489537 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET Solid
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322006, 35426322007

METHOD BLANK: 2647337 Matrix: Solid
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	0.25 U	0.50	0.25	10/31/18 09:35	
Barium	mg/kg	0.25 U	0.50	0.25	10/31/18 09:35	
Cadmium	mg/kg	0.025 U	0.050	0.025	10/31/18 09:35	
Chromium	mg/kg	0.12 U	0.25	0.12	10/31/18 09:35	
Lead	mg/kg	0.25 U	0.50	0.25	10/31/18 09:35	
Selenium	mg/kg	0.37 U	0.74	0.37	10/31/18 09:35	
Silver	mg/kg	0.12 U	0.25	0.12	10/31/18 09:35	

LABORATORY CONTROL SAMPLE: 2647338

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	13	12.9	99	80-120	
Barium	mg/kg	13	13.5	104	80-120	
Cadmium	mg/kg	1.3	1.3	101	80-120	
Chromium	mg/kg	13	13.7	105	80-120	
Lead	mg/kg	13	13.3	102	80-120	
Selenium	mg/kg	13	12.3	94	80-120	
Silver	mg/kg	1.3	1.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2647339 2647340

Parameter	Units	35425442004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	0.32 U	14.7	14.8	10.8	10.4	74	70	75-125	4	20	J(M1)
Barium	mg/kg	15.6	14.7	14.8	28.7	39.1	89	159	75-125	31	20	J(M1), J(R1)
Cadmium	mg/kg	0.032 U	1.5	1.5	1.3	1.3	91	87	75-125	3	20	
Chromium	mg/kg	9.1	14.7	14.8	31.1	29.6	150	139	75-125	5	20	J(M1)
Lead	mg/kg	8.4	14.7	14.8	21.9	22.1	92	93	75-125	1	20	
Selenium	mg/kg	0.47 U	14.7	14.8	11.7	11.4	79	77	75-125	2	20	
Silver	mg/kg	0.16 U	1.5	1.5	1.3	1.3	91	86	75-125	4	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490136 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET Solid
Associated Lab Samples: 35426322008, 35426322009, 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019, 35426322020, 35426322021, 35426322022, 35426322023

METHOD BLANK: 2650659 Matrix: Solid
Associated Lab Samples: 35426322008, 35426322009, 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019, 35426322020, 35426322021, 35426322022, 35426322023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	0.28 U	0.56	0.28	11/02/18 17:14	
Barium	mg/kg	0.28 U	0.56	0.28	11/02/18 17:14	
Cadmium	mg/kg	0.028 U	0.056	0.028	11/02/18 17:14	
Chromium	mg/kg	0.14 U	0.28	0.14	11/02/18 17:14	
Lead	mg/kg	0.28 U	0.56	0.28	11/02/18 17:14	
Selenium	mg/kg	0.42 U	0.84	0.42	11/02/18 17:14	
Silver	mg/kg	0.14 U	0.28	0.14	11/02/18 17:14	

LABORATORY CONTROL SAMPLE: 2650660

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	11.6	11.3	97	80-120	
Barium	mg/kg	11.6	11.9	102	80-120	
Cadmium	mg/kg	1.2	1.2	100	80-120	
Chromium	mg/kg	11.6	12.1	105	80-120	
Lead	mg/kg	11.6	11.7	101	80-120	
Selenium	mg/kg	11.6	10.3	89	80-120	
Silver	mg/kg	1.2	1.2	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2650661 2650662

Parameter	Units	35426322008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	0.0071 U mg/L	16.3	20.4	15.4	20.1	91	96	75-125	27	20	J(R1)
Barium	mg/kg	0.0049 I mg/L	16.3	20.4	18.5	23.0	87	91	75-125	21	20	J(R1)
Cadmium	mg/kg	0.00033 U mg/L	1.7	2.1	1.7	2.1	85	88	75-125	22	20	J(R1)
Chromium	mg/kg	0.0022 I mg/L	16.3	20.4	21.2	26.9	90	100	75-125	24	20	J(R1)
Lead	mg/kg	0.0046 U mg/L	16.3	20.4	16.2	20.1	95	95	75-125	21	20	J(R1)
Selenium	mg/kg	0.0085 U mg/L	16.3	20.4	14.7	18.3	84	85	75-125	22	20	J(R1)
Silver	mg/kg	0.0010 U mg/L	1.7	2.1	1.6	2.0	97	95	75-125	21	20	J(R1)

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490281 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET Solid
Associated Lab Samples: 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

METHOD BLANK: 2651230 Matrix: Solid
Associated Lab Samples: 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	0.26 U	0.53	0.26	11/02/18 21:08	
Barium	mg/kg	0.26 U	0.53	0.26	11/02/18 21:08	
Cadmium	mg/kg	0.026 U	0.053	0.026	11/02/18 21:08	
Chromium	mg/kg	0.13 U	0.26	0.13	11/02/18 21:08	
Lead	mg/kg	0.26 U	0.53	0.26	11/02/18 21:08	
Selenium	mg/kg	0.40 U	0.79	0.40	11/02/18 21:08	
Silver	mg/kg	0.13 U	0.26	0.13	11/02/18 21:08	

LABORATORY CONTROL SAMPLE: 2651231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	13.5	11.8	87	80-120	
Barium	mg/kg	13.5	12.6	93	80-120	
Cadmium	mg/kg	1.3	1.2	91	80-120	
Chromium	mg/kg	13.5	12.6	94	80-120	
Lead	mg/kg	13.5	12.6	93	80-120	
Selenium	mg/kg	13.5	10.9	81	80-120	
Silver	mg/kg	1.3	1.2	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651232 2651233

Parameter	Units	35426322024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	0.0071 U mg/L	15.9	16.5	14.2	14.7	89	89	75-125	4	20	
Barium	mg/kg	0.0047 I mg/L	15.9	16.5	15.8	16.2	98	96	75-125	2	20	
Cadmium	mg/kg	0.00033 U mg/L	1.6	1.6	1.5	1.6	93	93	75-125	4	20	
Chromium	mg/kg	0.0017 U mg/L	15.9	16.5	15.9	16.7	97	98	75-125	5	20	
Lead	mg/kg	0.0046 U mg/L	15.9	16.5	15.5	16.1	96	96	75-125	4	20	
Selenium	mg/kg	0.0085 U mg/L	15.9	16.5	13.3	13.7	83	83	75-125	3	20	
Silver	mg/kg	0.0010 U mg/L	1.6	1.6	1.5	1.5	92	91	75-125	4	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490138 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET SPLP
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009

METHOD BLANK: 2647118 Matrix: Water
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	0.0071 U	0.010	0.0071	11/04/18 00:26	
Barium	mg/L	0.00084 U	0.010	0.00084	11/04/18 00:26	
Cadmium	mg/L	0.00033 U	0.0010	0.00033	11/04/18 00:26	
Chromium	mg/L	0.0017 U	0.0050	0.0017	11/04/18 00:26	
Lead	mg/L	0.0046 U	0.010	0.0046	11/04/18 00:26	
Selenium	mg/L	0.0085 U	0.015	0.0085	11/04/18 00:26	
Silver	mg/L	0.0010 U	0.0050	0.0010	11/04/18 00:26	

LABORATORY CONTROL SAMPLE: 2650663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.25	0.25	100	80-120	
Barium	mg/L	.25	0.26	104	80-120	
Cadmium	mg/L	.025	0.026	104	80-120	
Chromium	mg/L	.25	0.26	103	80-120	
Lead	mg/L	.25	0.26	104	80-120	
Selenium	mg/L	.25	0.25	102	80-120	
Silver	mg/L	.025	0.026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2650664 2650665

Parameter	Units	35426322001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0071 U	.25	.25	0.25	0.25	99	100	75-125	1	20	
Barium	mg/L	0.0029 I	.25	.25	0.26	0.26	102	103	75-125	1	20	
Cadmium	mg/L	0.00033 U	.025	.025	0.026	0.026	102	103	75-125	2	20	
Chromium	mg/L	0.0017 U	.25	.25	0.25	0.26	101	103	75-125	2	20	
Lead	mg/L	0.0046 U	.25	.25	0.26	0.26	103	104	75-125	1	20	
Selenium	mg/L	0.0085 U	.25	.25	0.25	0.26	101	102	75-125	1	20	
Silver	mg/L	0.0010 U	.025	.025	0.025	0.025	100	101	75-125	1	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490139 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET SPLP
Associated Lab Samples: 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019

METHOD BLANK: 2648212 Matrix: Water
Associated Lab Samples: 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	0.0071 U	0.010	0.0071	11/02/18 18:28	
Barium	mg/L	0.00084 U	0.010	0.00084	11/02/18 18:28	
Cadmium	mg/L	0.00033 U	0.0010	0.00033	11/02/18 18:28	
Chromium	mg/L	0.0017 U	0.0050	0.0017	11/02/18 18:28	
Lead	mg/L	0.0046 U	0.010	0.0046	11/02/18 18:28	
Selenium	mg/L	0.0085 U	0.015	0.0085	11/02/18 18:28	
Silver	mg/L	0.0010 U	0.0050	0.0010	11/02/18 18:28	

LABORATORY CONTROL SAMPLE: 2650666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.25	0.25	99	80-120	
Barium	mg/L	.25	0.25	102	80-120	
Cadmium	mg/L	.025	0.026	103	80-120	
Chromium	mg/L	.25	0.25	102	80-120	
Lead	mg/L	.25	0.26	104	80-120	
Selenium	mg/L	.25	0.25	101	80-120	
Silver	mg/L	.025	0.025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2650667 2650668

Parameter	Units	35426322010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0071 U	.25	.25	0.25	0.26	98	104	75-125	5	20	
Barium	mg/L	0.0023 I	.25	.25	0.26	0.27	103	107	75-125	4	20	
Cadmium	mg/L	0.00033 U	.025	.025	0.026	0.027	104	108	75-125	4	20	
Chromium	mg/L	0.0017 U	.25	.25	0.26	0.27	102	107	75-125	5	20	
Lead	mg/L	0.0046 U	.25	.25	0.26	0.27	103	108	75-125	4	20	
Selenium	mg/L	0.0085 U	.25	.25	0.26	0.27	103	106	75-125	3	20	
Silver	mg/L	0.0010 U	.025	.025	0.025	0.026	102	106	75-125	4	20	

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QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490267 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET SPLP
Associated Lab Samples: 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

METHOD BLANK: 2649084 Matrix: Water
Associated Lab Samples: 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025, 35426322026, 35426322027, 35426322028, 35426322029, 35426322030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	0.0071 U	0.010	0.0071	11/02/18 10:05	
Barium	mg/L	0.00084 U	0.010	0.00084	11/02/18 10:05	
Cadmium	mg/L	0.00033 U	0.0010	0.00033	11/02/18 10:05	
Chromium	mg/L	0.0017 U	0.0050	0.0017	11/02/18 10:05	
Lead	mg/L	0.0046 U	0.010	0.0046	11/02/18 10:05	
Selenium	mg/L	0.0085 U	0.015	0.0085	11/02/18 10:05	
Silver	mg/L	0.0010 U	0.0050	0.0010	11/02/18 10:05	

LABORATORY CONTROL SAMPLE: 2651119

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	.25	0.25	101	80-120	
Barium	mg/L	.25	0.25	101	80-120	
Cadmium	mg/L	.025	0.026	103	80-120	
Chromium	mg/L	.25	0.26	103	80-120	
Lead	mg/L	.25	0.25	102	80-120	
Selenium	mg/L	.25	0.25	101	80-120	
Silver	mg/L	.025	0.026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2651120 2651121

Parameter	Units	35426322020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0071 U	.25	.25	0.25	0.25	99	101	75-125	2	20	
Barium	mg/L	0.0038 I	.25	.25	0.26	0.26	101	102	75-125	1	20	
Cadmium	mg/L	0.00033 U	.025	.025	0.025	0.026	102	103	75-125	1	20	
Chromium	mg/L	0.0017 U	.25	.25	0.26	0.26	102	103	75-125	1	20	
Lead	mg/L	0.0046 U	.25	.25	0.25	0.25	101	101	75-125	0	20	
Selenium	mg/L	0.0085 U	.25	.25	0.25	0.25	100	100	75-125	0	20	
Silver	mg/L	0.0010 U	.025	.025	0.026	0.026	102	103	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

QC Batch: 490976 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 35426322001, 35426322002, 35426322003, 35426322004, 35426322005, 35426322006, 35426322007, 35426322008, 35426322009, 35426322010, 35426322011, 35426322012, 35426322013, 35426322014, 35426322015, 35426322016, 35426322017, 35426322018, 35426322019, 35426322020, 35426322021, 35426322022, 35426322023, 35426322024, 35426322025

SAMPLE DUPLICATE: 2655328

Parameter	Units	35425318001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.7	2	5	

SAMPLE DUPLICATE: 2655329

Parameter	Units	35426322008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	29.0	30.9	6	5	J(D6)

SAMPLE DUPLICATE: 2655330

Parameter	Units	35426322017 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.3	19.5	4	5	

SAMPLE DUPLICATE: 2655331

Parameter	Units	35426322026 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	29.7	28.1	6	5	J(D6)

SAMPLE DUPLICATE: 2655332

Parameter	Units	35426765002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	2.3	2.4	3	5	

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
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALIFIERS

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

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(D6)	Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
J(R1)	Estimated Value. RPD value was outside control limits.
V	Indicates that the analyte was detected in both the sample and the associated method blank.

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35426322001	**C-1 (upstream)**	EPA 3050	489537	EPA 6010	489734
35426322002	**C-2 (downstream)**	EPA 3050	489537	EPA 6010	489734
35426322003	**A-1 (upstream)**	EPA 3050	489537	EPA 6010	489734
35426322004	**A-2 (downstream)**	EPA 3050	489537	EPA 6010	489734
35426322006	**B-2 (downstream)**	EPA 3050	489537	EPA 6010	489734
35426322007	**ER-N (upstream)**	EPA 3050	489537	EPA 6010	489734
35426322008	**ER-S (downstream)**	EPA 3050	490136	EPA 6010	490379
35426322009	**D-1 (upstream)**	EPA 3050	490136	EPA 6010	490379
35426322010	**D-2 (downstream)**	EPA 3050	490136	EPA 6010	490379
35426322011	**E-1 (upstream)**	EPA 3050	490136	EPA 6010	490379
35426322012	**E-2 (downstream)**	EPA 3050	490136	EPA 6010	490379
35426322013	**F-1 (upstream)**	EPA 3050	490136	EPA 6010	490379
35426322014	**F-2 (downstream)**	EPA 3050	490136	EPA 6010	490379
35426322015	**50**	EPA 3050	490136	EPA 6010	490379
35426322016	**47**	EPA 3050	490136	EPA 6010	490379
35426322017	**43**	EPA 3050	490136	EPA 6010	490379
35426322018	**39**	EPA 3050	490136	EPA 6010	490379
35426322019	**36**	EPA 3050	490136	EPA 6010	490379
35426322020	**32**	EPA 3050	490136	EPA 6010	490379
35426322021	**29**	EPA 3050	490136	EPA 6010	490379
35426322022	**25**	EPA 3050	490136	EPA 6010	490379
35426322023	**20**	EPA 3050	490136	EPA 6010	490379
35426322024	**18**	EPA 3050	490281	EPA 6010	490380
35426322025	**15**	EPA 3050	490281	EPA 6010	490380
35426322026	**12**	EPA 3050	490281	EPA 6010	490380
35426322027	**9**	EPA 3050	490281	EPA 6010	490380
35426322028	**6**	EPA 3050	490281	EPA 6010	490380
35426322029	**3**	EPA 3050	490281	EPA 6010	490380
35426322030	**1**	EPA 3050	490281	EPA 6010	490380
35426322001	**C-1 (upstream)**	EPA 3010	490138	EPA 6010	490224
35426322002	**C-2 (downstream)**	EPA 3010	490138	EPA 6010	490224
35426322003	**A-1 (upstream)**	EPA 3010	490138	EPA 6010	490224
35426322004	**A-2 (downstream)**	EPA 3010	490138	EPA 6010	490224
35426322005	**B-1 (upstream)**	EPA 3010	490138	EPA 6010	490224
35426322006	**B-2 (downstream)**	EPA 3010	490138	EPA 6010	490224
35426322007	**ER-N (upstream)**	EPA 3010	490138	EPA 6010	490224
35426322008	**ER-S (downstream)**	EPA 3010	490138	EPA 6010	490224
35426322009	**D-1 (upstream)**	EPA 3010	490138	EPA 6010	490224
35426322010	**D-2 (downstream)**	EPA 3010	490139	EPA 6010	490225
35426322011	**E-1 (upstream)**	EPA 3010	490139	EPA 6010	490225
35426322012	**E-2 (downstream)**	EPA 3010	490139	EPA 6010	490225
35426322013	**F-1 (upstream)**	EPA 3010	490139	EPA 6010	490225
35426322014	**F-2 (downstream)**	EPA 3010	490139	EPA 6010	490225
35426322015	**50**	EPA 3010	490139	EPA 6010	490225
35426322016	**47**	EPA 3010	490139	EPA 6010	490225
35426322017	**43**	EPA 3010	490139	EPA 6010	490225
35426322018	**39**	EPA 3010	490139	EPA 6010	490225

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35426322019	**36**	EPA 3010	490139	EPA 6010	490225
35426322020	**32**	EPA 3010	490267	EPA 6010	490347
35426322021	**29**	EPA 3010	490267	EPA 6010	490347
35426322022	**25**	EPA 3010	490267	EPA 6010	490347
35426322023	**20**	EPA 3010	490267	EPA 6010	490347
35426322024	**18**	EPA 3010	490267	EPA 6010	490347
35426322025	**15**	EPA 3010	490267	EPA 6010	490347
35426322026	**12**	EPA 3010	490267	EPA 6010	490347
35426322027	**9**	EPA 3010	490267	EPA 6010	490347
35426322028	**6**	EPA 3010	490267	EPA 6010	490347
35426322029	**3**	EPA 3010	490267	EPA 6010	490347
35426322030	**1**	EPA 3010	490267	EPA 6010	490347
35426322001	**C-1 (upstream)**	EPA 7470	490359	EPA 7470	490631
35426322002	**C-2 (downstream)**	EPA 7470	490359	EPA 7470	490631
35426322003	**A-1 (upstream)**	EPA 7470	490359	EPA 7470	490631
35426322004	**A-2 (downstream)**	EPA 7470	490359	EPA 7470	490631
35426322005	**B-1 (upstream)**	EPA 7470	490359	EPA 7470	490631
35426322006	**B-2 (downstream)**	EPA 7470	490359	EPA 7470	490631
35426322007	**ER-N (upstream)**	EPA 7470	490359	EPA 7470	490631
35426322008	**ER-S (downstream)**	EPA 7470	490359	EPA 7470	490631
35426322009	**D-1 (upstream)**	EPA 7470	490359	EPA 7470	490631
35426322010	**D-2 (downstream)**	EPA 7470	490360	EPA 7470	490633
35426322011	**E-1 (upstream)**	EPA 7470	490360	EPA 7470	490633
35426322012	**E-2 (downstream)**	EPA 7470	490360	EPA 7470	490633
35426322013	**F-1 (upstream)**	EPA 7470	490360	EPA 7470	490633
35426322014	**F-2 (downstream)**	EPA 7470	490360	EPA 7470	490633
35426322015	**50**	EPA 7470	490360	EPA 7470	490633
35426322016	**47**	EPA 7470	490360	EPA 7470	490633
35426322017	**43**	EPA 7470	490360	EPA 7470	490633
35426322018	**39**	EPA 7470	490360	EPA 7470	490633
35426322019	**36**	EPA 7470	490360	EPA 7470	490633
35426322020	**32**	EPA 7470	490361	EPA 7470	490635
35426322021	**29**	EPA 7470	490361	EPA 7470	490635
35426322022	**25**	EPA 7470	490361	EPA 7470	490635
35426322023	**20**	EPA 7470	490361	EPA 7470	490635
35426322024	**18**	EPA 7470	490361	EPA 7470	490635
35426322025	**15**	EPA 7470	490361	EPA 7470	490635
35426322026	**12**	EPA 7470	490361	EPA 7470	490635
35426322027	**9**	EPA 7470	490361	EPA 7470	490635
35426322028	**6**	EPA 7470	490361	EPA 7470	490635
35426322029	**3**	EPA 7470	490361	EPA 7470	490635
35426322030	**1**	EPA 7470	490361	EPA 7470	490635
35426322001	**C-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322002	**C-2 (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322003	**A-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322004	**A-2 (downstream)**	EPA 7471	490515	EPA 7471	491042

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35426322005	**B-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322006	**B-2 (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322007	**ER-N (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322008	**ER-S (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322009	**D-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322010	**D-2 (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322011	**E-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322012	**E-2 (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322013	**F-1 (upstream)**	EPA 7471	490515	EPA 7471	491042
35426322014	**F-2 (downstream)**	EPA 7471	490515	EPA 7471	491042
35426322015	**50**	EPA 7471	490515	EPA 7471	491042
35426322016	**47**	EPA 7471	490518	EPA 7471	491044
35426322017	**43**	EPA 7471	490518	EPA 7471	491044
35426322018	**39**	EPA 7471	490518	EPA 7471	491044
35426322019	**36**	EPA 7471	490518	EPA 7471	491044
35426322020	**32**	EPA 7471	490518	EPA 7471	491044
35426322021	**29**	EPA 7471	490518	EPA 7471	491044
35426322022	**25**	EPA 7471	490518	EPA 7471	491044
35426322023	**20**	EPA 7471	490518	EPA 7471	491044
35426322024	**18**	EPA 7471	490518	EPA 7471	491044
35426322025	**15**	EPA 7471	490518	EPA 7471	491044
35426322026	**12**	EPA 7471	490518	EPA 7471	491044
35426322027	**9**	EPA 7471	490518	EPA 7471	491044
35426322028	**6**	EPA 7471	490518	EPA 7471	491044
35426322029	**3**	EPA 7471	490518	EPA 7471	491044
35426322030	**1**	EPA 7471	490518	EPA 7471	491044
35426322001	**C-1 (upstream)**	ASTM D2974-87	490976		
35426322002	**C-2 (downstream)**	ASTM D2974-87	490976		
35426322003	**A-1 (upstream)**	ASTM D2974-87	490976		
35426322004	**A-2 (downstream)**	ASTM D2974-87	490976		
35426322005	**B-1 (upstream)**	ASTM D2974-87	490976		
35426322006	**B-2 (downstream)**	ASTM D2974-87	490976		
35426322007	**ER-N (upstream)**	ASTM D2974-87	490976		
35426322008	**ER-S (downstream)**	ASTM D2974-87	490976		
35426322009	**D-1 (upstream)**	ASTM D2974-87	490976		
35426322010	**D-2 (downstream)**	ASTM D2974-87	490976		
35426322011	**E-1 (upstream)**	ASTM D2974-87	490976		
35426322012	**E-2 (downstream)**	ASTM D2974-87	490976		
35426322013	**F-1 (upstream)**	ASTM D2974-87	490976		
35426322014	**F-2 (downstream)**	ASTM D2974-87	490976		
35426322015	**50**	ASTM D2974-87	490976		
35426322016	**47**	ASTM D2974-87	490976		
35426322017	**43**	ASTM D2974-87	490976		
35426322018	**39**	ASTM D2974-87	490976		
35426322019	**36**	ASTM D2974-87	490976		
35426322020	**32**	ASTM D2974-87	490976		
35426322021	**29**	ASTM D2974-87	490976		
35426322022	**25**	ASTM D2974-87	490976		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Weeki Wachee 18-55-9510
Pace Project No.: 35426322

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35426322023	**20**	ASTM D2974-87	490976		
35426322024	**18**	ASTM D2974-87	490976		
35426322025	**15**	ASTM D2974-87	490976		
35426322026	**12**	ASTM D2974-87	490976		
35426322027	**9**	ASTM D2974-87	490976		
35426322028	**6**	ASTM D2974-87	490976		
35426322029	**3**	ASTM D2974-87	490976		
35426322030	**1**	ASTM D2974-87	490976		

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CHAIN-OF-CUSTODY

The Chain-of-Custody is a LEGAL

WO# : 35426322

35426322

Page : 1 Of 3

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Ardaman & Associates, Inc.-Tampa	Report To: Tonya Erbland	Attention:
Address: 3925 Coconut Palm Drive	Copy To:	Company Name:
Tampa, FL 33619		Address:
Email: terbland@ardaman.com	Purchase Order #:	Pace Quote:
Phone: 813-620-3389 Fax:	Project Name: Weeki Wachee 18-55-9510	Pace Project Manager: lori.palmer@pacelabs.com,
Requested Due Date:	Project #:	Pace Profile #: 6608-25

Regulatory Agency

State / Location

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other (Ice)	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: TOT RCRA 8 / SPLP RCRA 8	Residual Chlorine (Y/N)
1	C-1 (upstream)			10/23	3:06				1								X		X	
2	C-2 (downstream)				3:13				1								X		X	
3	A-1 (upstream)				1:24				1								X		X	
4	A-2 (downstream)				1:35				1								X		X	
5	B-1 (upstream)				2:10				1								X		X	
6	B-2 (downstream)				2:06				1								X		X	
7	~~EQ~~ ER-4 (upstream)				2:25				1								X		X	
8	~~ER-5~~ (downstream)				2:36				1								X		X	
9	D-1 (upstream)			10/24	9:37				1								X		X	
10	D-2 (downstream)				9:43				1								X		X	
11	E-1 (upstream)				10:00				1								X		X	
12	E-2 (downstream)				10:05				1								X		X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Empty Containers	~~[illegible]~~ Pace	10-18-18	0745	AA1	10-18-18	0800	
	AA1	10-25-18	0923	for Pace	10-25-18	1315	T203
	for pace 10-25-18	1440		NELSON PACE	10-25-18	1440	2.1 Y N Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tonya Erbland

SIGNATURE of SAMPLER: DATE Signed: 10-25-18

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 2 Of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Ardaman & Associates, Inc.-Tampa	Report To:	Tonya Erbland	Attention:	
Address:	3925 Coconut Palm Drive	Copy To:		Company Name:	
Tampa, FL 33619				Address:	
Email:	terbland@ardaman.com	Purchase Order #:		Pace Quote:	
Phone:	813-620-3389 Fax:	Project Name:	Weeki Wachee 18-55-9510	Pace Project Manager:	lori.palmer@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	6608-25

Regulatory Agency

State / Location

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other TSP	Analyses Test Y/N	TOT RCRA 8 / SPLP RCRA 8	Residual Chlorine (Y/N)
1	F-1 (upstream)			10/24	10:23				1								X		X	
2	F-2 (downstream)				10:27				1								X		X	
3	50				10:58				1								X		X	
4	47				11:12				1								X		X	
5	43				11:30				1								X		X	
6	39				11:44				1								X		X	
7	36				12:00				1								X		X	
8	32				12:13				1								X		X	
9	29				12:23				1								X		X	
10	25				12:38				1								X		X	
11	20				1:10				1								X		X	
12	18			↓	1:26				1								X		X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Empty Containers	Pace	10/25/18	0748	AAI	0800					
	AAI	10-25-18	0923	for Pace	10-25-18	1315	T203			
	for Pace 10-25-18	1440		PACE	10-25-18	1440	2.1	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tonya Erbland

SIGNATURE of SAMPLER:

DATE Signed: 10-25-18

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 3 Of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Ardaman & Associates, Inc.-Tampa	Report To:	Tonya Erbland	Attention:	
Address:	3925 Coconut Palm Drive	Copy To:		Company Name:	
Tampa, FL 33619				Address:	
Email:	terbland@ardaman.com	Purchase Order #:		Pace Quote:	
Phone:	813-620-3389 Fax:	Project Name:	Weeki Wachee 18-55-9510	Pace Project Manager:	lori.palmer@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	6608-25

Regulatory Agency

State / Location

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other ICP	Analyses Test Y/N	TOT RCRA 8 / SPLP RCRA 8	Residual Chlorine (Y/N)
1	15			10/21	1044				1								X		X	
2	12				2000				1								X		X	
3	9				2222				1								X		X	
4	6				2336				1								X		X	
5	3				3320				1								X		X	
6	1				4300				1								X		X	
7																				
8																				
9																				
10																				
11																				
12																				

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Empty Containers	Pace	10/18/18	0745		10-18-18	0800				
	AAI	10-25-18	0923	face	10-25-18	1315	T203			
	face 10-25-18	1440		[illegible]/PACE	10-25-18	1440	2.1	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tonya Erbland

SIGNATURE of SAMPLER: [signature]

DATE Signed: 10-25-18

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

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

Sample Condition Upon Receipt Form (SCUR)

Project # WO# : 35426322

Project Manager: PM: LAP **Due Date:** 11/01/18

Client: CLIENT: 37-ARDASS

Date and Initials of person:
Examining contents: MVL
Label: 10/25/18
Deliver:
pH: N/A

Thermometer Used: T-203 Date: 10/25/18 Time: 1440 Initials: MVL

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

Cooler #1 Temp.°C	2.1 (Visual)	0.0 (Correction Factor)	2.1 (Actual)	☒ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	(Visual)	(Correction Factor)	(Actual)	☐ Samples on ice, cooling process has begun

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

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

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

Tracking #

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

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

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

		Comments:
Chain of Custody Present	☒Yes ☐ No ☐N/A	
Chain of Custody Filled Out	☒Yes ☐ No ☐N/A	
Relinquished Signature & Sampler Name COC	☒Yes ☐ No ☐N/A	
Samples Arrived within Hold Time	☒Yes ☐ No ☐N/A	
Rush TAT requested on COC	☐Yes ☒ No ☐N/A	
Sufficient Volume	☒Yes ☐ No ☐N/A	
Correct Containers Used	☒Yes ☐ No ☐N/A	
Containers Intact	☒Yes ☐ No ☐N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☐Yes ☒ No ☐N/A	No collection Times
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): Standing water in every Sample

Project Manager Review: Date:

APPENDIX C

SOILS LAB TEST RESULTS

Project: Weeki Wachee River

Project No. 113-18-55-9510

Client: VHB

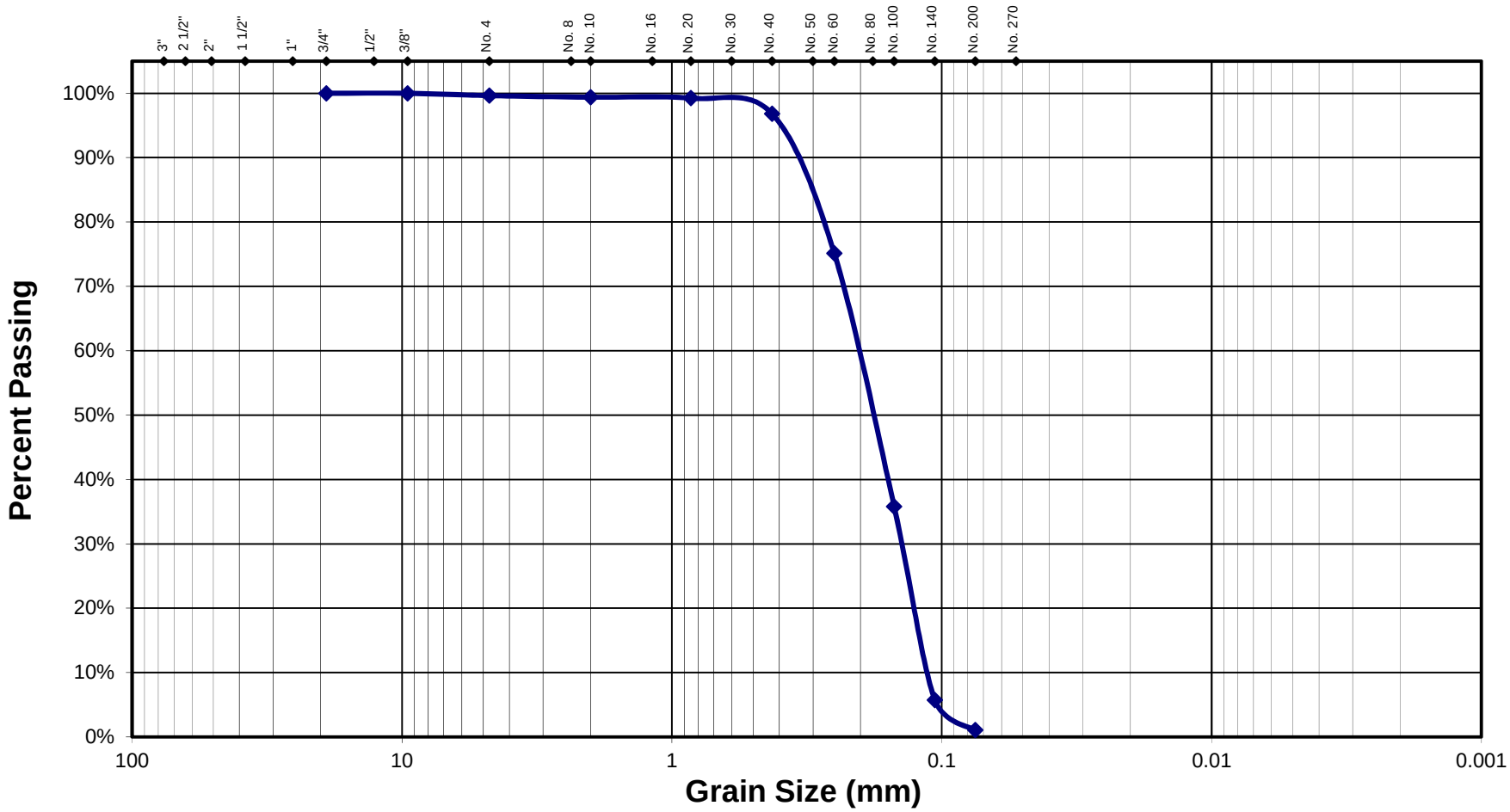
Date: 1/11/2019

SOILS LAB TEST SUMMARY

Sample ID	% Passing No. 200 Sieve	Organic Content, %	Specific Gravity, G
1	16	2	-*
3	22	1	2.57
6	21	1	2.59
9	23	1	2.59
12	3	2	2.70
15	1	0	2.56
18	8	1	-*
20	10	0	2.68
25	1	1	2.62
29	8	0	2.59
32	8	0	2.59
36	1	0	2.63
39	2	2	2.56
43	1	1	2.64
47	1	0	2.50
50	1	1	2.50
A-1 (upstream)	3	4	2.32
A-2 (downstream)	7	1	2.40
B-1 (upstream)	15	2	2.40
B-2 (downstream)	1	0	2.43
C-1 (upstream)	2	1	2.46
C-2 (downstream)	5	1	2.50
D-1 (upstream)	2	2	2.50
D-2 (downstream)	2	0	2.55
E-1 (upstream)	3	1	2.43
E-2 (downstream)	1	1	2.55
ER-N (upstream)	2	1	2.54
ER-S (downstream)	4	4	2.49
F-1 (upstream)	2	1	2.46
F-2 (downstream)	4	1	2.42

*Not enough material to run test.
**Soils lab tests run performed on composited (combined) samples.

GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-1 **Sample Location:** Sample No. 47
Sample Description: SP - Gray fine with shell fragment
Percent Passing No. 200 Sieve = 1.1% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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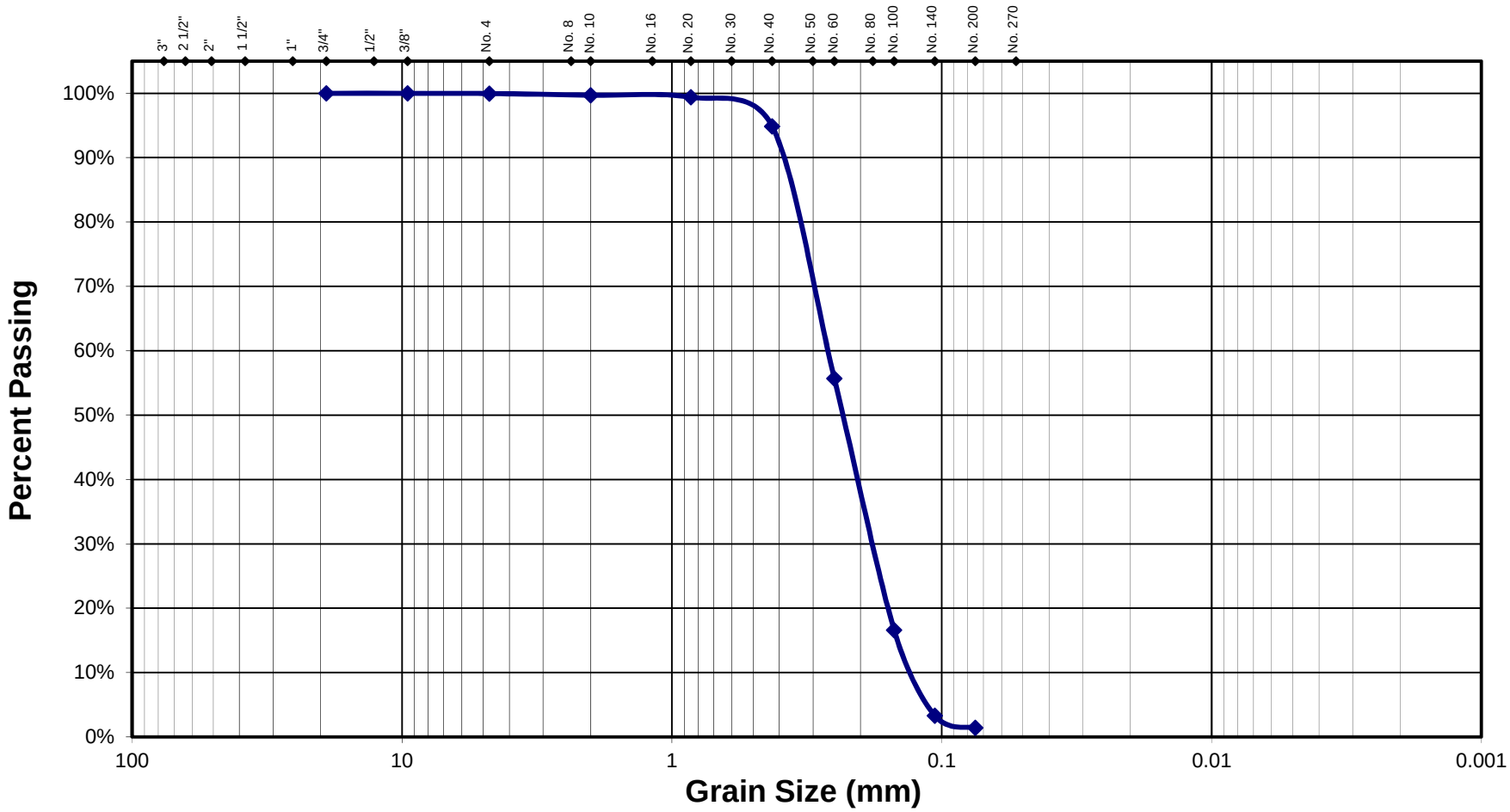
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-2 **Sample Location:** Sample No. 50
Sample Description: SP - Light brown fine with trace of shell fragment
Percent Passing No. 200 Sieve = 1.4% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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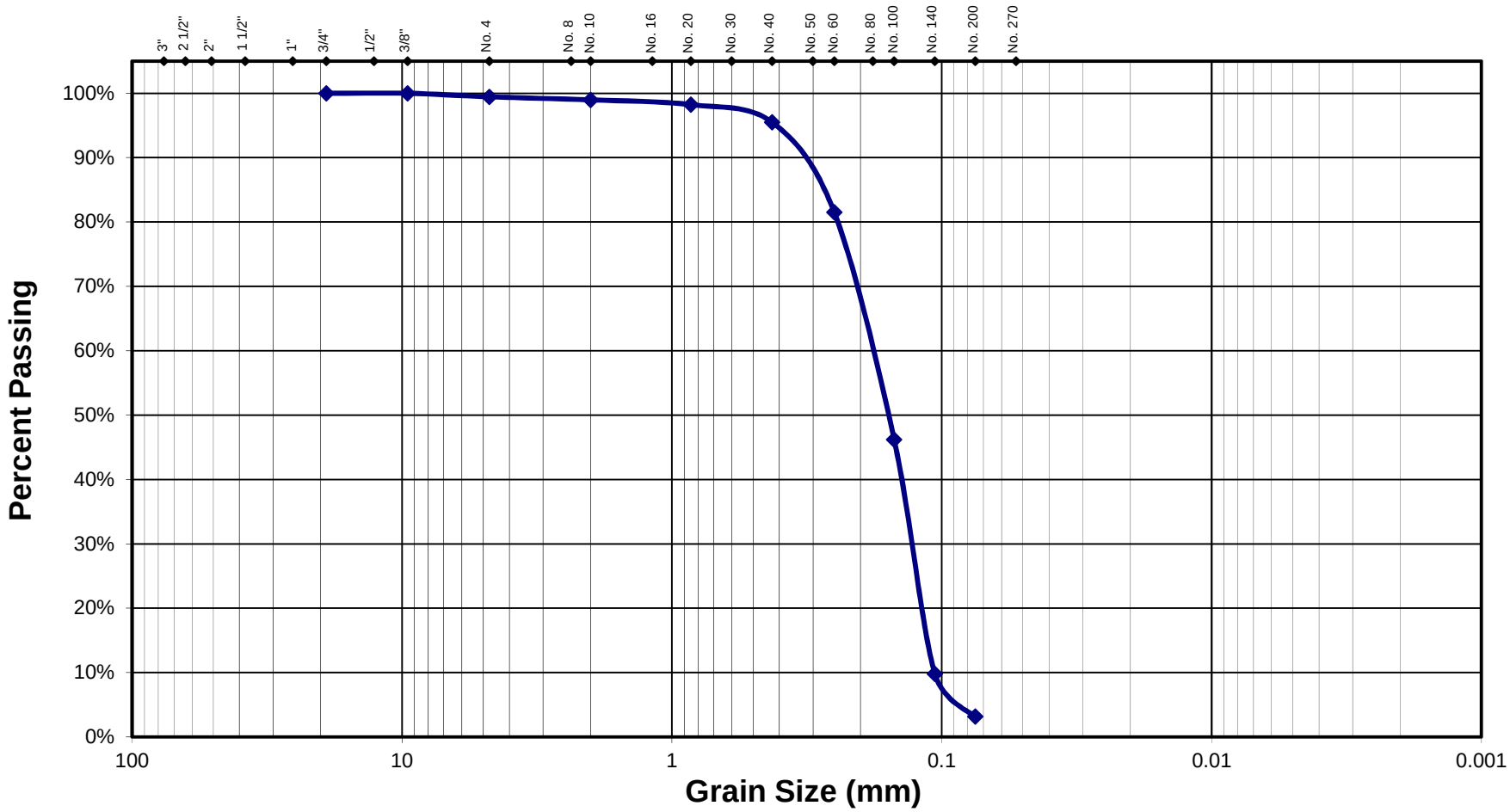
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-13 **Sample Location:** Sample No. A-1
Sample Description: SP - Dark brown fine sand
Percent Passing No. 200 Sieve = 3.2% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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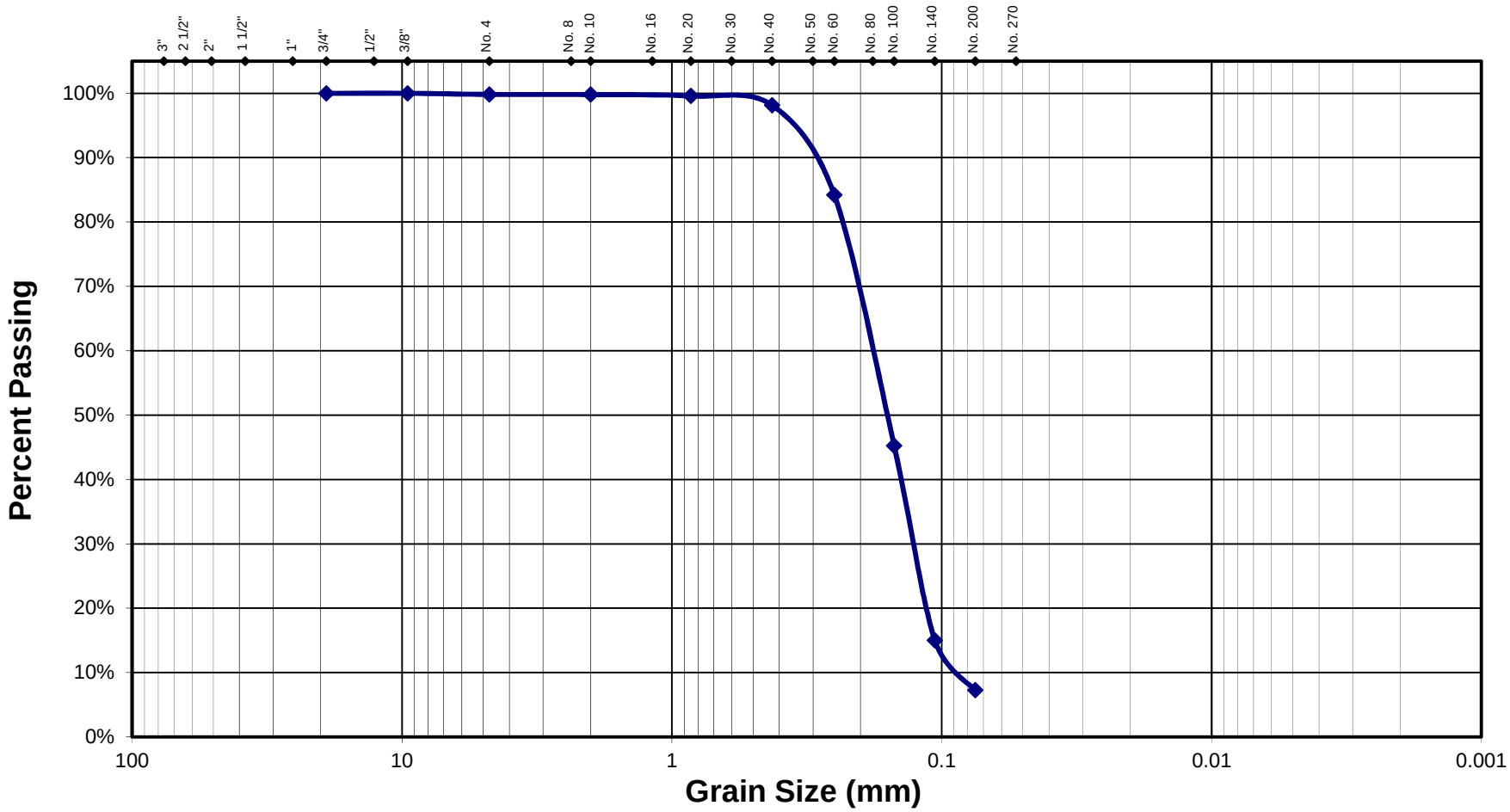
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-14 **Sample Location:** Sample No. A-2
Sample Description: SP-SM - Brown slightly silty fine sand with trace of shell fragment
Percent Passing No. 200 Sieve = 7.3% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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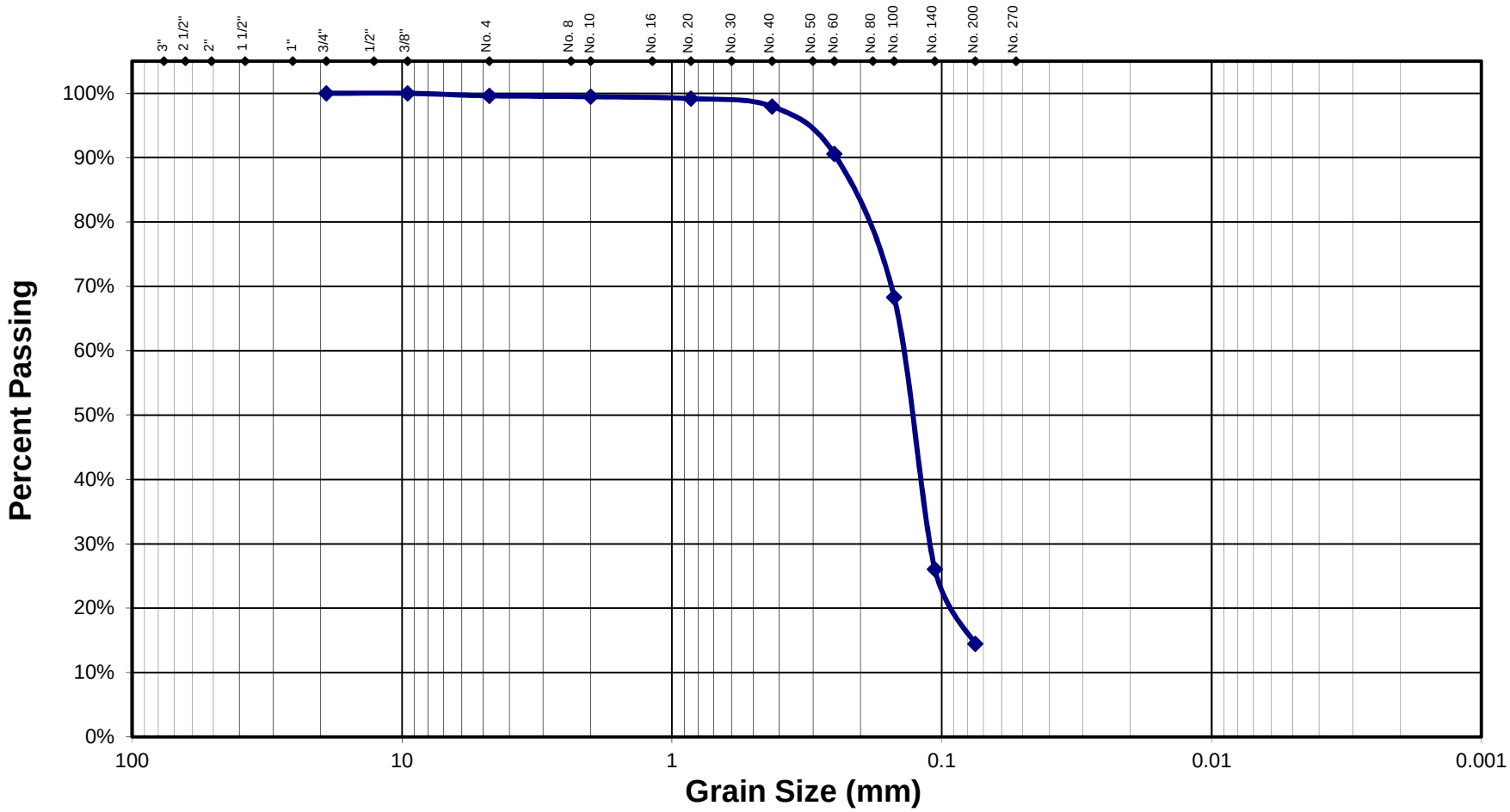
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-12 **Sample Location:** Sample No. B-1
Sample Description: SC - Brown clayey fine sand
Percent Passing No. 200 Sieve = 14.5% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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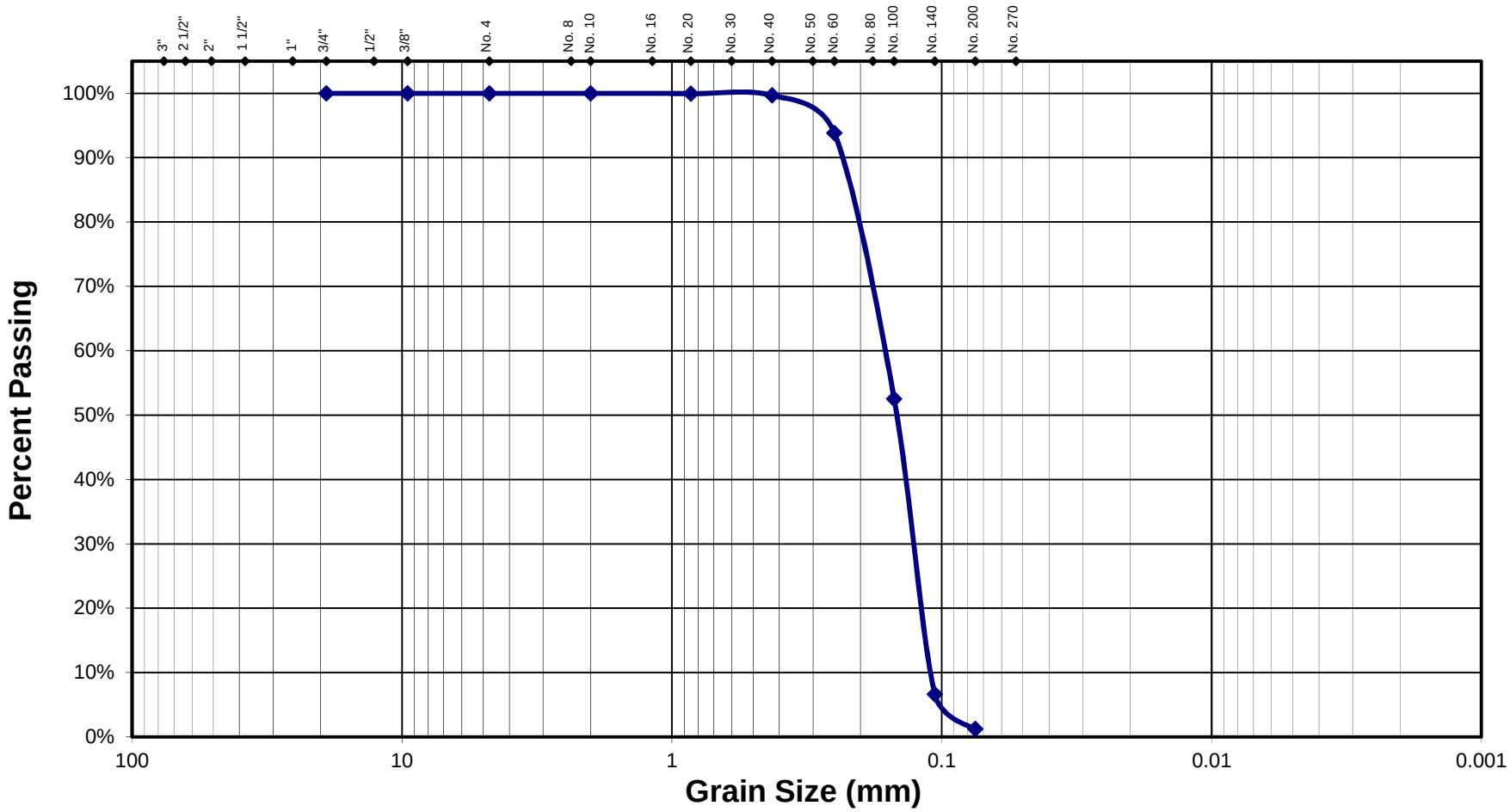
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-11 **Sample Location:** Sample No. B-2
Sample Description: SP - Light gray fine sand
Percent Passing No. 200 Sieve = 1.2% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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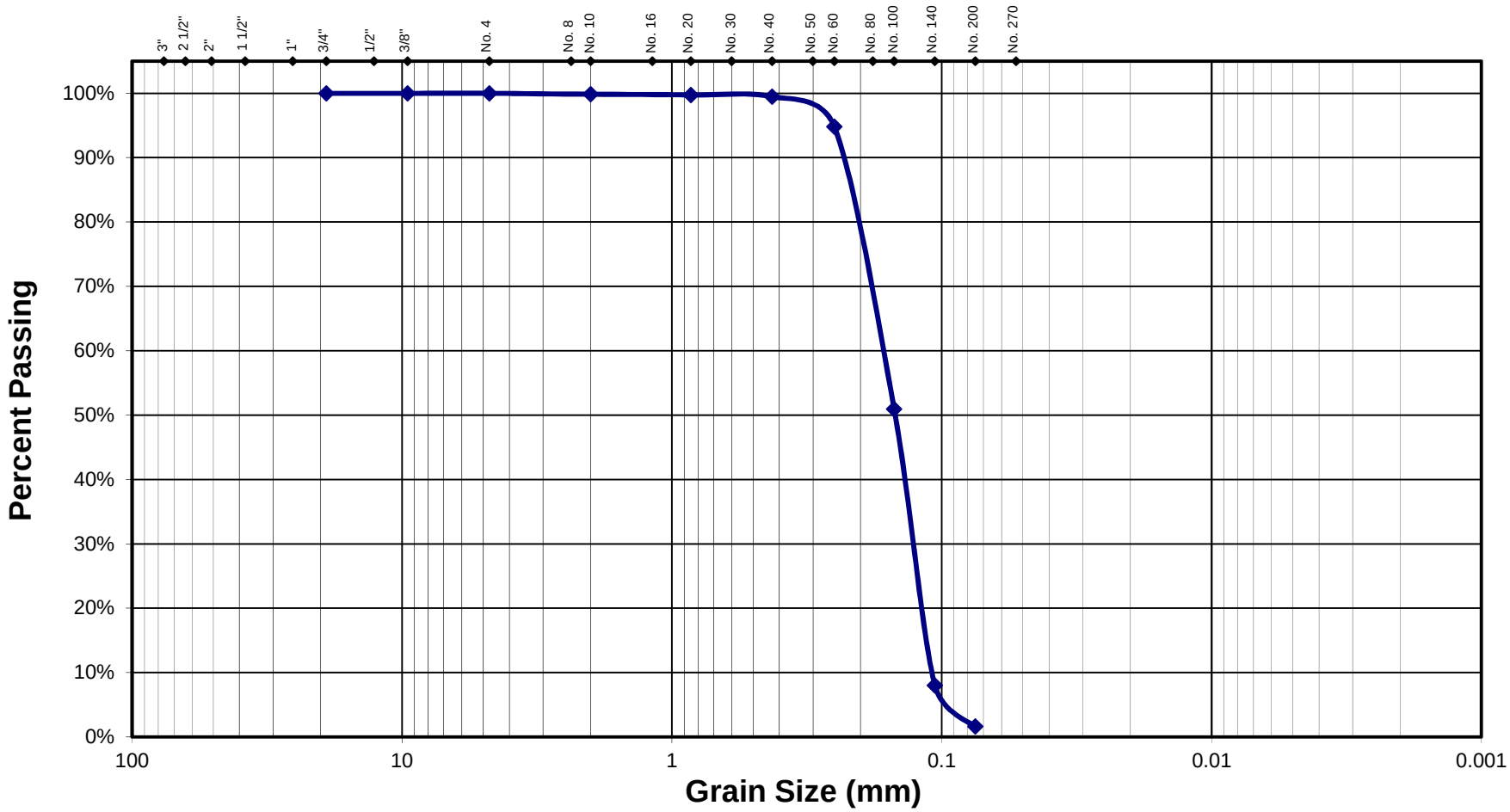
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-16 **Sample Location:** Sample No. C-1
Sample Description: SP - Gray fine sand with organics
Percent Passing No. 200 Sieve = 1.6% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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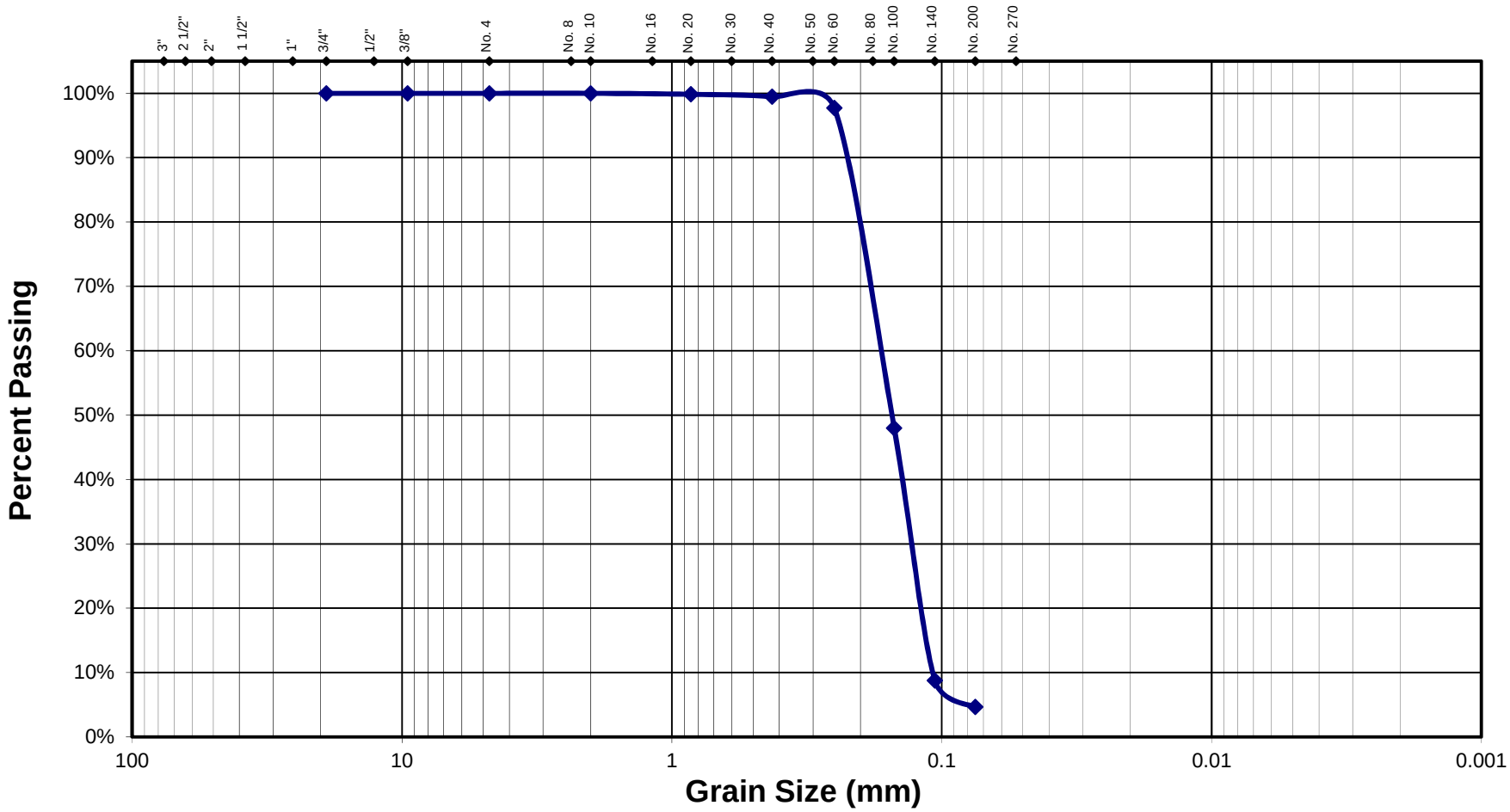
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-15 **Sample Location:** Sample No. C-2
Sample Description: SP - Light gray to gray fine sand
Percent Passing No. 200 Sieve = 4.7% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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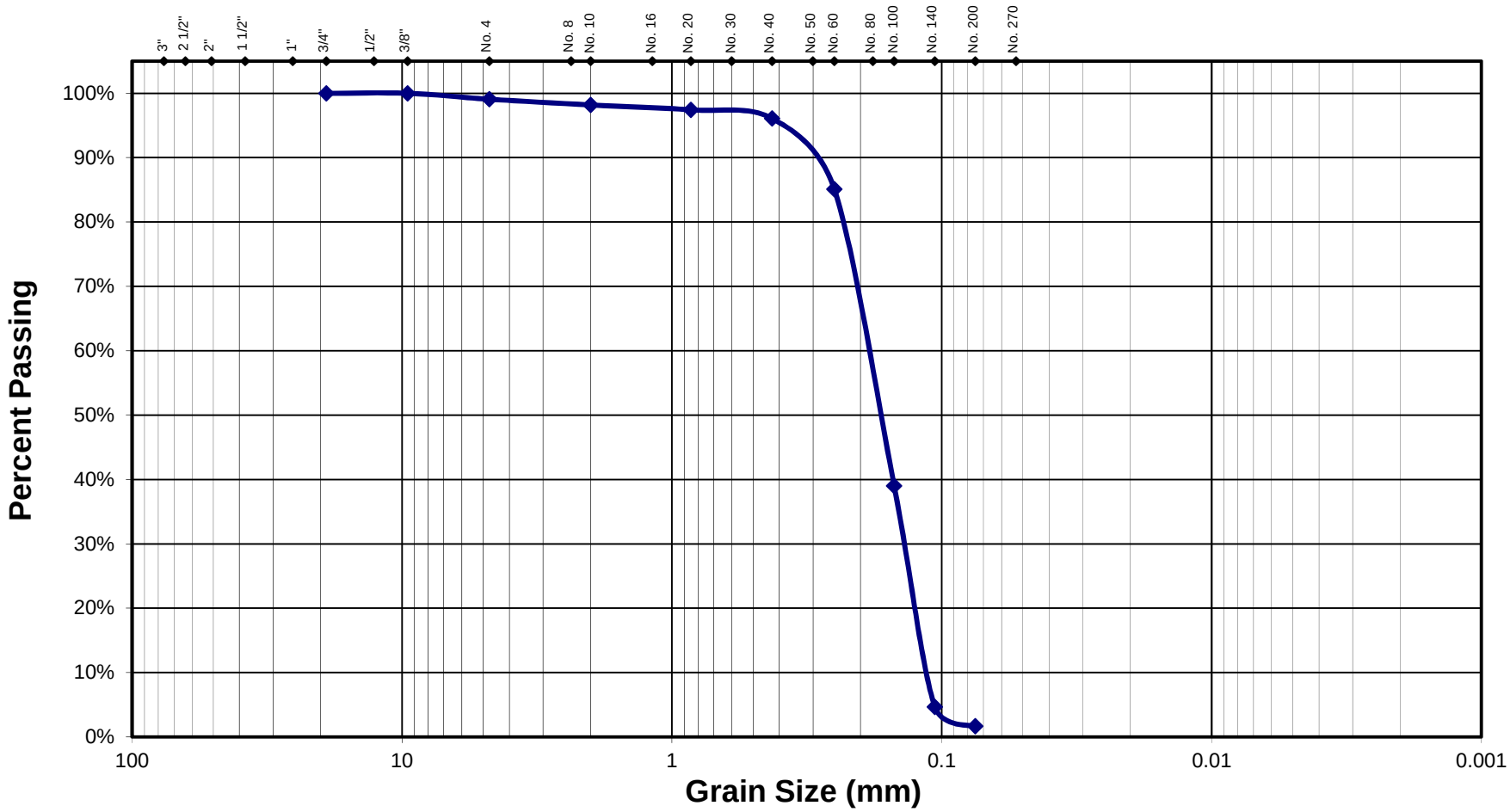
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-8 **Sample Location:** Sample No. D-1
Sample Description: SP - Brown fine with trace of shell fragment
Percent Passing No. 200 Sieve = 1.7% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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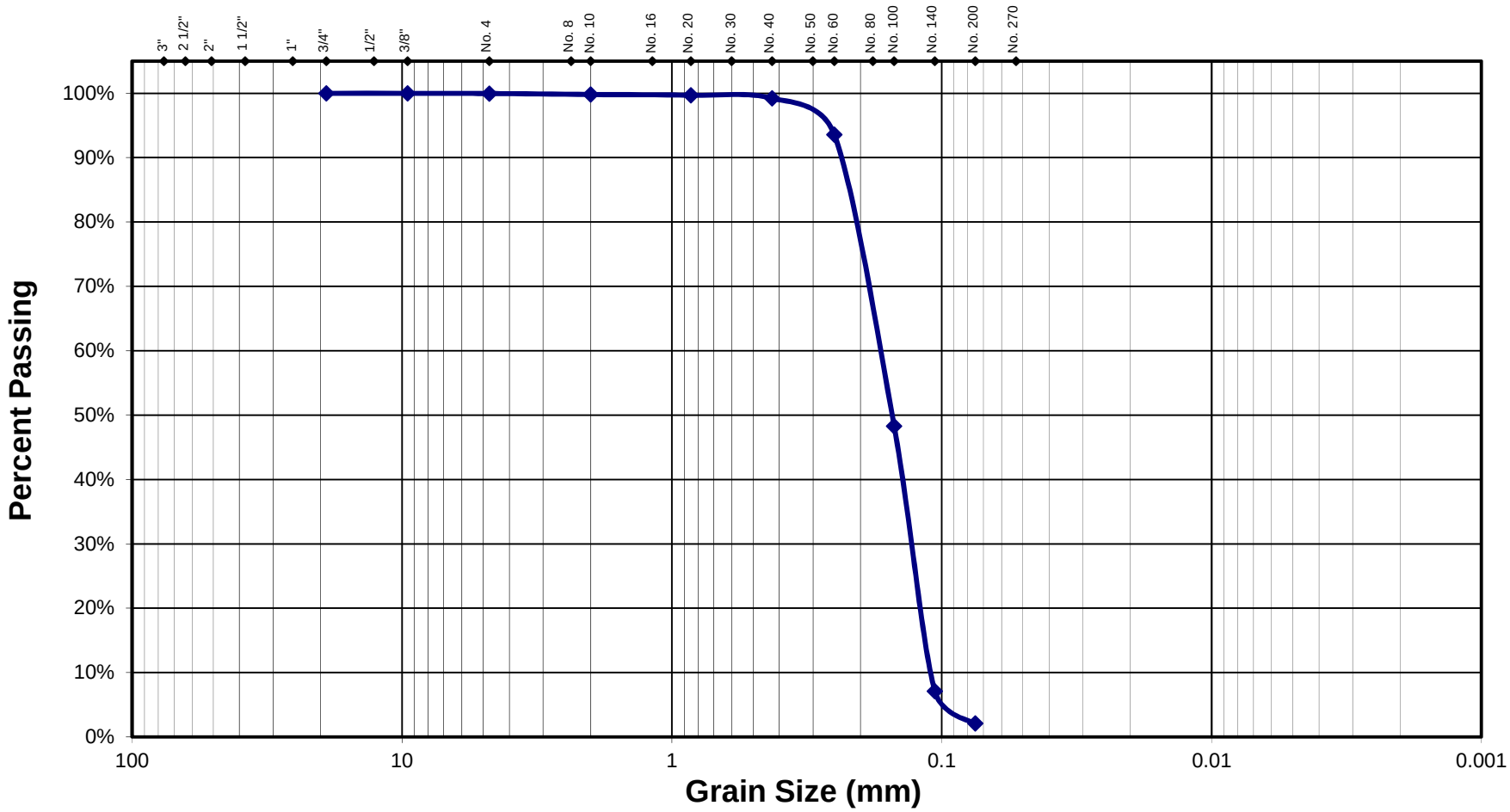
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-7 **Sample Location:** Sample No. D-2
Sample Description: SP - Light brown fine with trace of shell fragment
Percent Passing No. 200 Sieve = 2.1% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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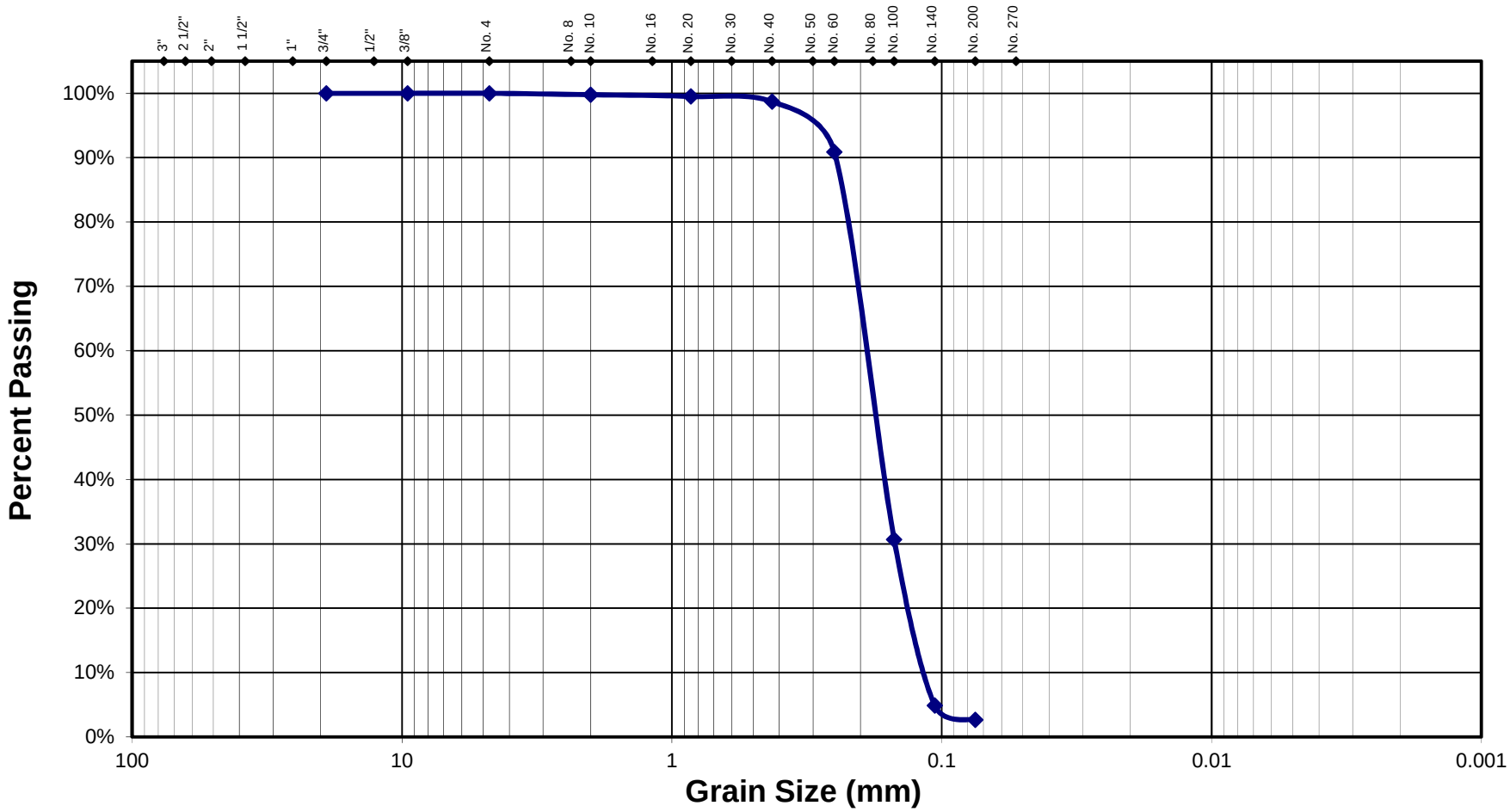
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-6 **Sample Location:** Sample No. E-1
Sample Description: SP - Brown fine sand
Percent Passing No. 200 Sieve = 2.7% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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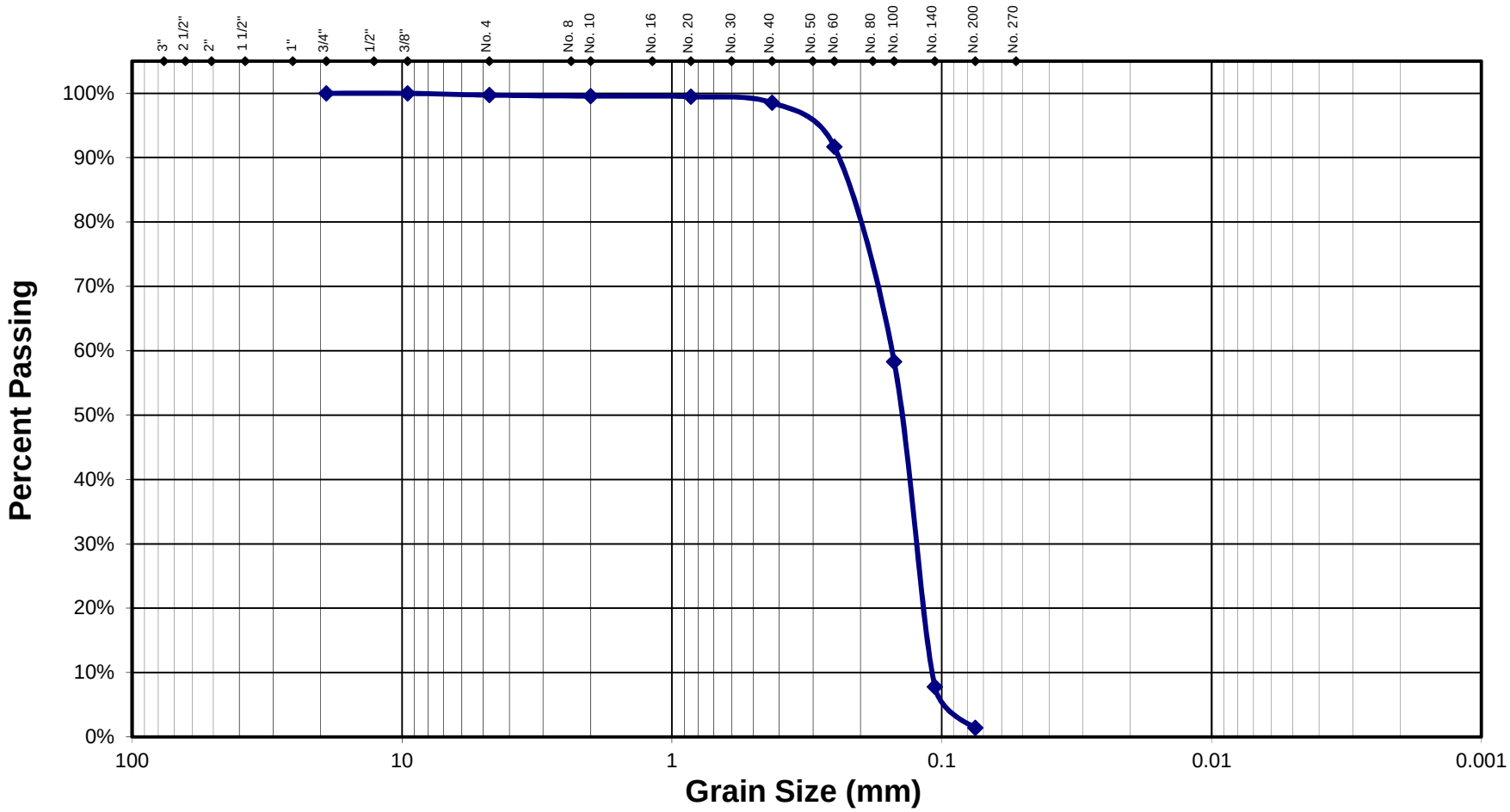
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-5 **Sample Location:** Sample No. E-2
Sample Description: SP - Brown fine sand with trace of shell fragment
Percent Passing No. 200 Sieve = 1.4% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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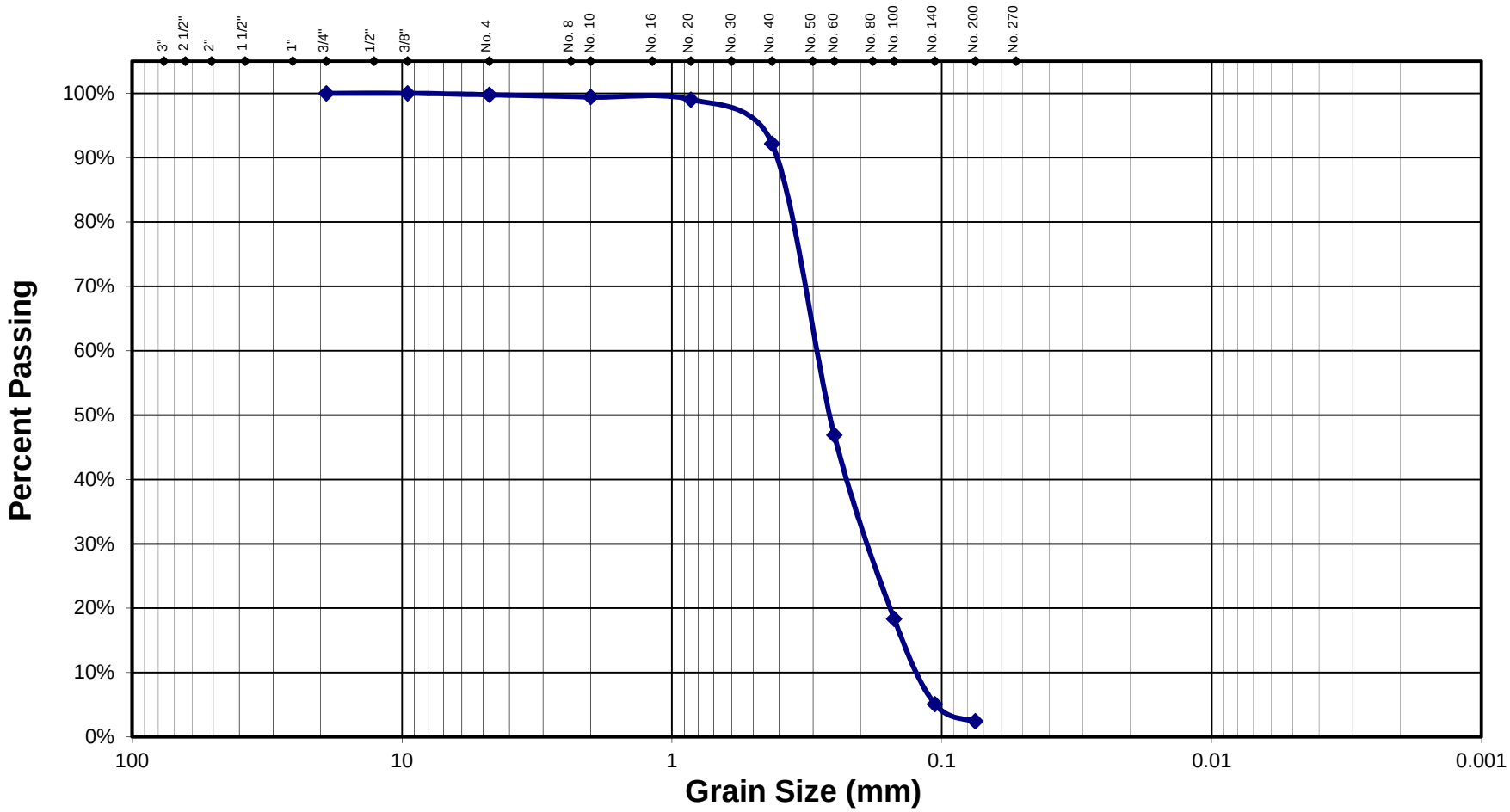
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-10 **Sample Location:** Sample No. ER-N
Sample Description: SP - Light brown fine with shell fragment
Percent Passing No. 200 Sieve = 2.4% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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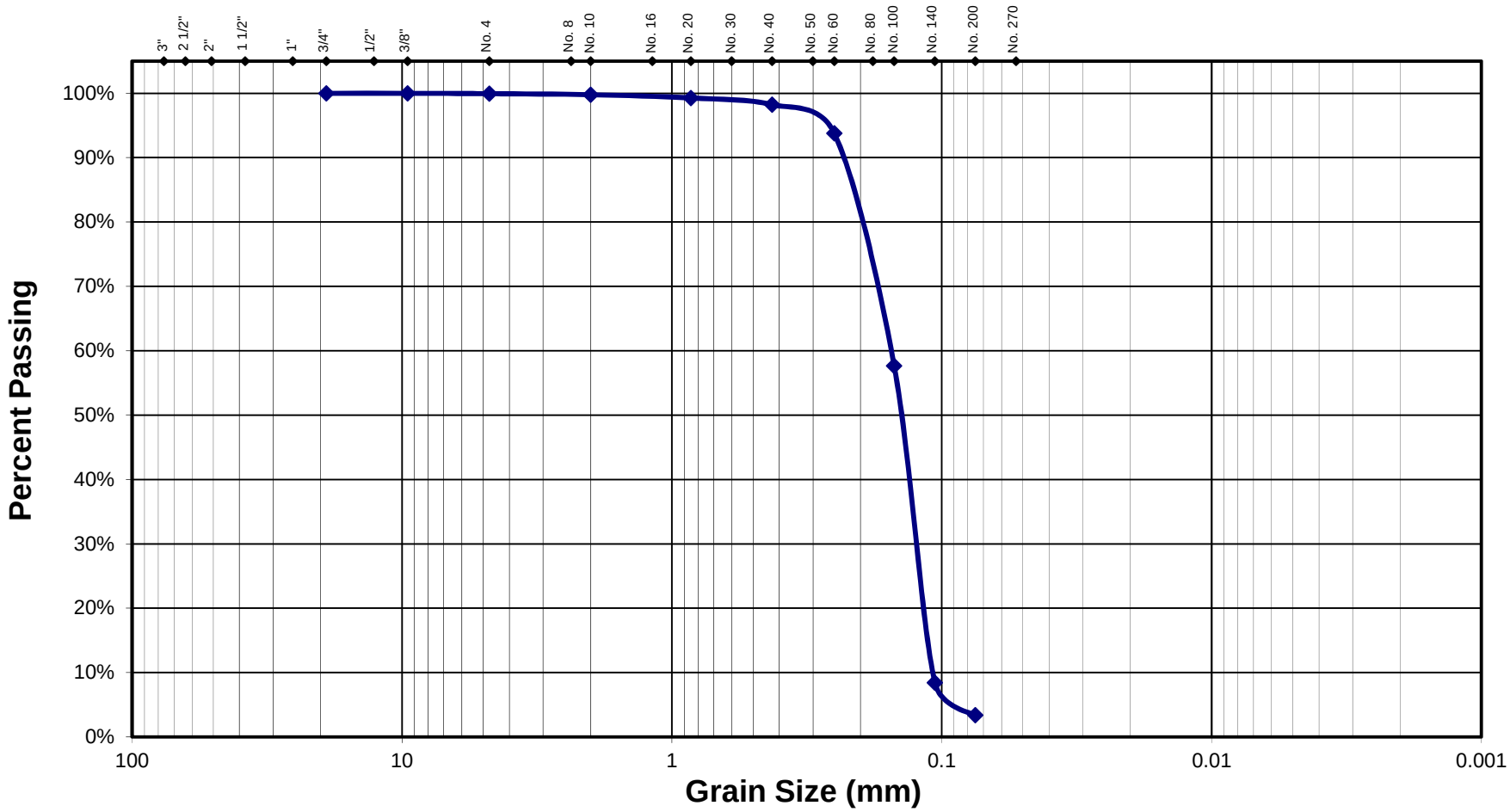
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-9 **Sample Location:** Sample No. ER-S
Sample Description: SP - Light to dark brown fine with trace of organics
Percent Passing No. 200 Sieve = 3.4% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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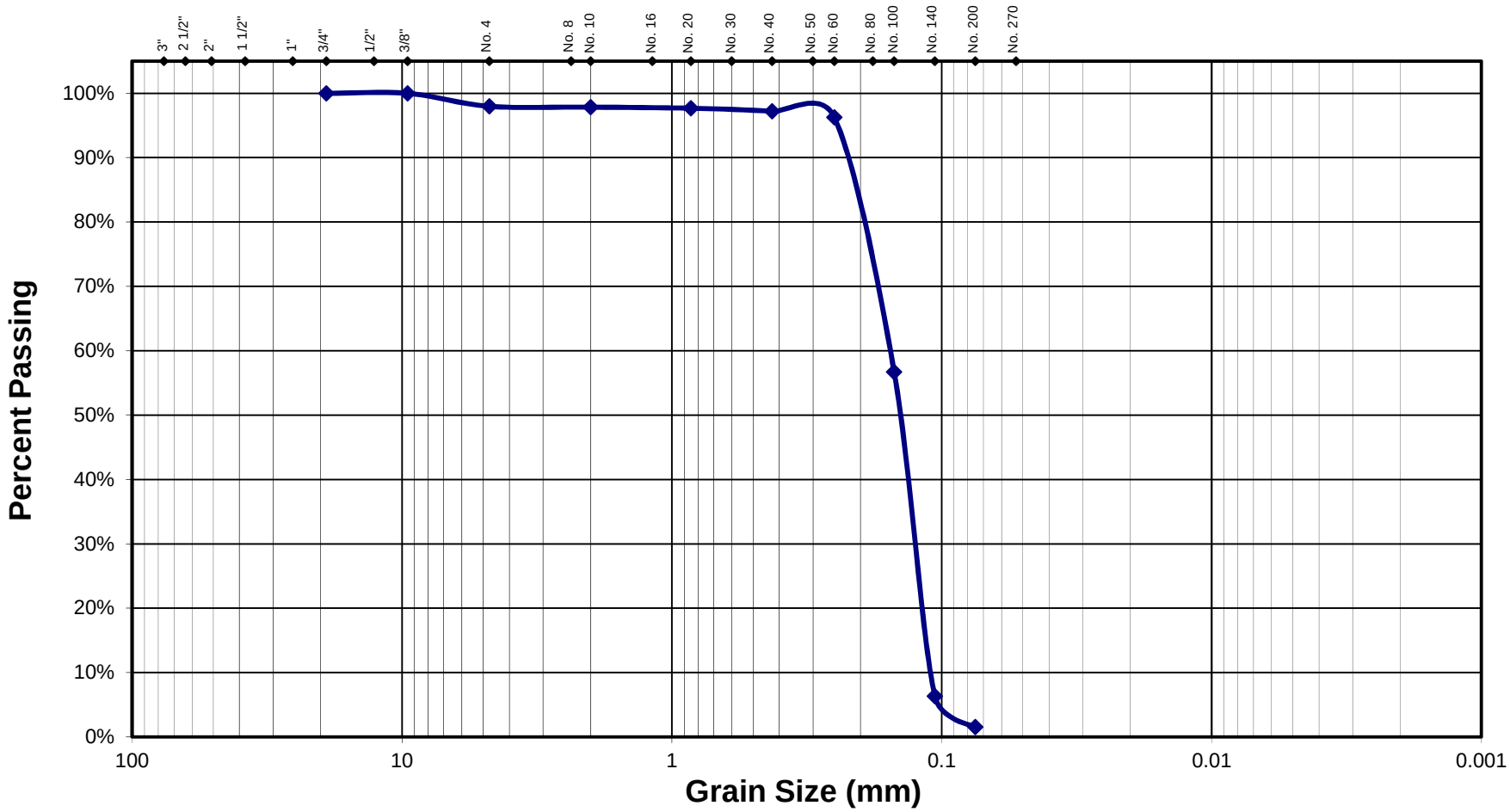
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-4 **Sample Location:** Sample No. F-1
Sample Description: SP - Brown fine sand with rock
Percent Passing No. 200 Sieve = 1.5% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

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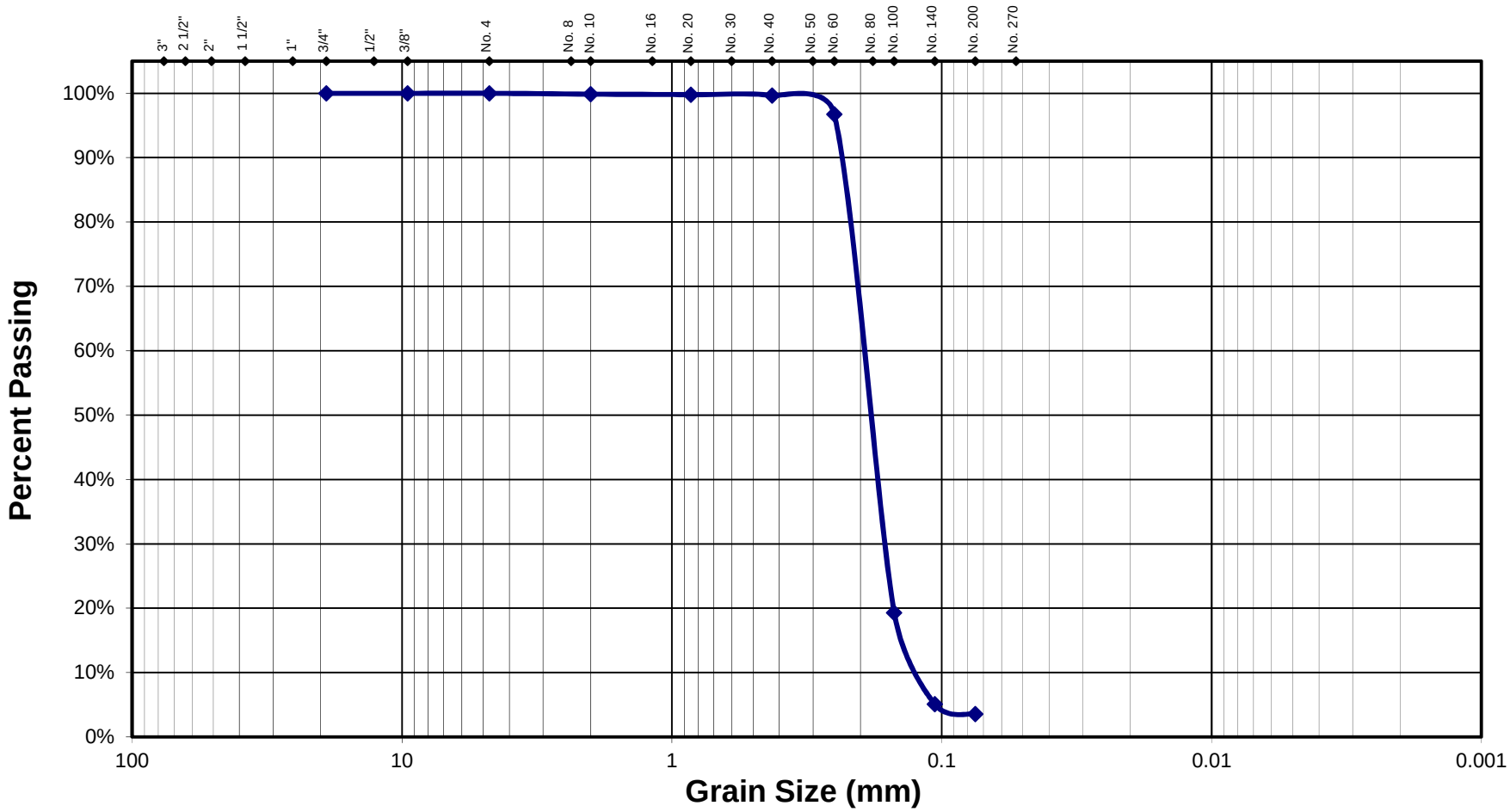
GRAIN SIZE DISTRIBUTION CURVE



GRAVEL	SAND		SILT	CLAY
	Coarse to Medium	Fine		

Project Name: WEEKI WACHEE RIVER CHANNEL RES
Project Location: WEEKI WACHEE, Florida
Client Name: VHB

A&A File Number: 18-55-9510

Sample No.: 7921-3 **Sample Location:** Sample No. F-2
Sample Description: SP - Light gray fine sand
Percent Passing No. 200 Sieve = 3.6% **LL:** Not Tested **PL:** Not Tested **PI:** Not Tested

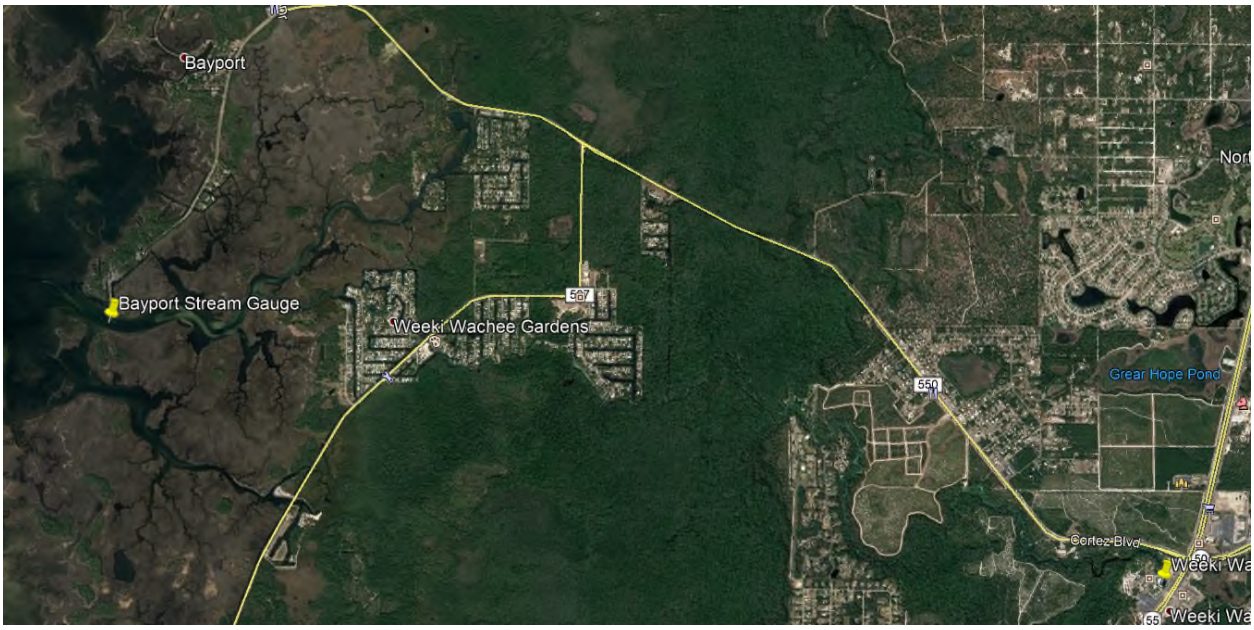
ARDAMAN & ASSOCIATES, INC.
Geotechnical, Environmental and Materials Consultants
TAMPA BRANCH

APPENDIX D

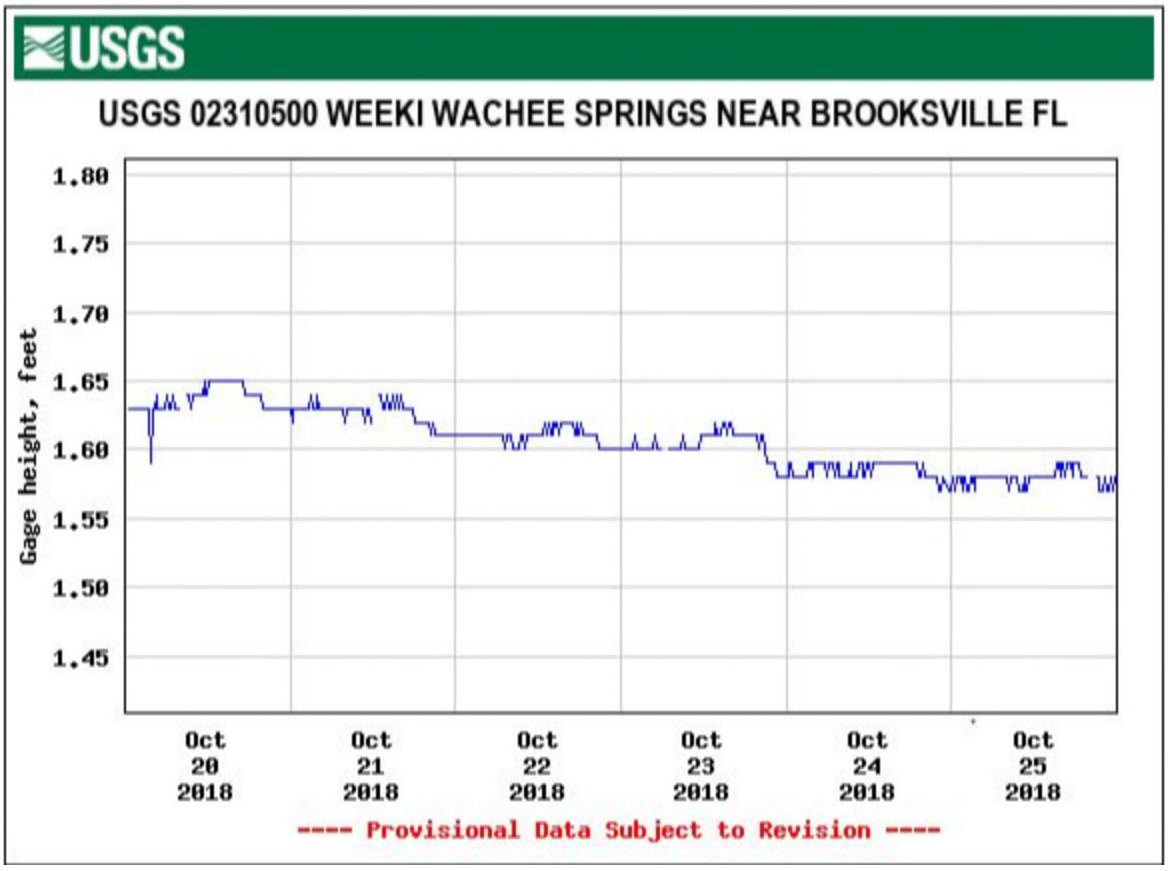
STREAM ELEVATION DISCUSSION

STREAM ELEVATION ESTIMATE

Ardaman performed soil sampling within a segment of the Weeki Wachee River between USGS Stream Gage 02310500 at Weeki Wachee and the Bayport USGS Stream Gage 02310600. The locations of these gages are shown below.

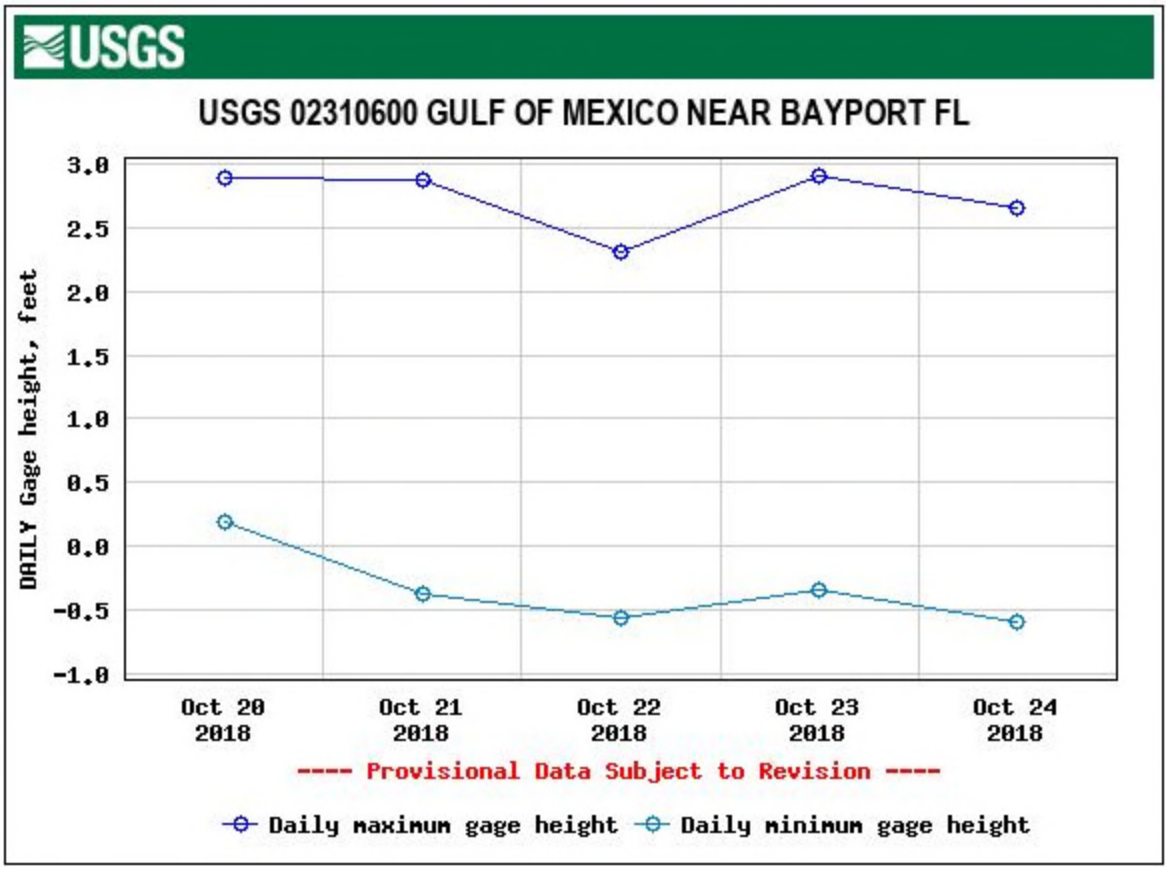


Soil samples were obtained 10/23/2018 and 10/24/2018. The Weeki Wachee Stream Gage data from those days is presented below:



As per the data shown on the stream Gage for that day, the Weeki Wachee Gage height those days was relatively constant at about 1.59 feet, say +1.6'.

The land surface elevation for this station is provided as +8.12 feet NGVD29. The river was described by our sampling team as fresh and non-tidal, with a relatively constant water level throughout the sampling day. We recommend a stream water elevation of approximately +1.6 feet be used for sampling points F-1,F-2, E1, E2, D1, D2, C1, C2, NE, SE, B1, B2, A1 and A2.



The Bayport station was tidal with maximum and minimum gage heights for these days shown at left. As can be seen, the average gage height of the river at that location is about 1.2'.

With the eastern sample locations having an average river gage height of approximate +1.6, we suggest the western sample locations (1 through 50) be estimated to have an average gage height of about +1.4'.

APPENDIX E

FIELD SAMPLING PROCEDURES

FIELD SAMPLING METHODOLGY

Various sampling methodologies were employed to maximize the depth of sediment sampling. These are briefly discussed below:

- Macro-Core Sampling - This method includes driving a steel macro-tube up to 5 feet into the sediment. After the sampling tool is advanced, it is withdrawn and soil samples retained in plastic tubes are collected. This method was attempted but found to not retrieve the full depth of sample so alternate sampling tools and methods were implemented.
- Fixed Piston Sampling – This method includes advancing a thin wall tube into the sediment with a sample retainer cap on the top of the sampler. The sampler is advanced until very dense sand, rock or very stiff clay is encountered. The sampler is then withdrawn and the soils removed from the sampler.