Wood Environment & Infrastructure Solutions, Inc.
1101 Channelside Drive, Suite 200
Tampa, FL 33602
T: 813-289-0750
www.woodplc.com

Technical Memorandum

To: Board of Supervisors, Isle of Palms Special District (IOPSD)

From: Joe Wagner PE, D.NE, BCEE, Leah Deleon PE, Erik Oij
Wood Environment & Infrastructure Solutions, Inc.

Date: March 18, 2020 (Updated March 26, 2020)

Re. Task 3A: Geotechnical Data Collection and Sediment Chemistry Sampling
Isle of Palms Dredging Project

Wood Project No. 6735179416.03

For **Task 3A** of the referenced project scope of services, Wood Environment and Infrastructure Solutions, Inc. (Wood) collected twenty-six sediment samples (**Figure 1 & 2 Attached**) and documented, composited, and tested each sample for the Resource and Recovery Act (RCRA) Eight (8) Metals at the request of the Isle of Palms Special District (IOPSD).

On March 3rd and 4th, 2020, Wood collected the twenty-six samples using a piston tube sampler. Each sample was composited at the site. Wood then submitted the samples to a local environmental laboratory (Advanced Environmental Laboratories, Inc.) for specific sediment chemistry analyses, which is documented below.

Sediment Chemistry Testing Results

The findings of the chemical testing and sampling are provided in **Appendix A**. The sediment samples for chemical analyses were collected using a steel piston tube sediment sampler, as noted above, from the twenty-six locations within the Isle of Palms project area and analyzed for the presence of metals.

Specifically, Wood staff collected fourteen samples from the northern and central channels (**Figure 1**), and twelve (12) samples from the southern channels (**Figure 2**). Locations were selected to provide an appropriate level of spatial distribution coverage and were reviewed and approved by the Harbour Waterway Special District (HWSD).

The vertical distribution of the cores included samples from approximately the top 18 inches of the sediment.

Wood staff then compared the composite sample results to the Florida Department of Environmental Protection's (FDEP) Soil and Groundwater Cleanup Target Levels (CTL) per the Florida Administrative Code (FAC) Chapter 62-777 noted in the table listed below.

Soil Clean-up Target Level (Table II, Chapter 62-777 FAC)				
Analyte	**Units**	**Residential**	**Commercial**	**Leachability Based on Groundwater of Low Yield / Poor Quality**
Arsenic	mg/kg	2.1	12	N/A
Barium	mg/kg	120	130000	16000
Cadmium	mg/kg	82	1700	75
Chromium	mg/kg	210	470	380
Lead	mg/kg	400	1400	N/A
Mercury	mg/kg	3	17	21
Selenium	mg/kg	440	11000	52
Silver	mg/kg	410	8200	170

Standard for Residential and Commercial/Industrial Soil Clean-up Target Levels for eight RCRA Metals (FAC Chapter 62-777)

Results from the chemical characterization of the sediment samples showed that when compared to the CTLs, only one metal, Arsenic, showed potential for exceeding residential level contamination target levels.

Specifically, the sediment characterization results indicated that eighteen of the twenty-six sample locations contained Arsenic concentrations at or above the 2.1 mg/kg Soil Clean-up Target Level (SCTL) for residential direct exposure limits. Meanwhile, eight of the sites with Arsenic exceedances were found within the northern and central channels, and ten were found within the southern channels, as shown in **Figure 3** and **Figure 4**. Also, the median values for Arsenic concentrations exceed residential direct exposure limits (SCTL) for both the combined northern and central and the southern channels.

More importantly, all individual values and the median region values are all still well below commercial/industrial SCTL standards.

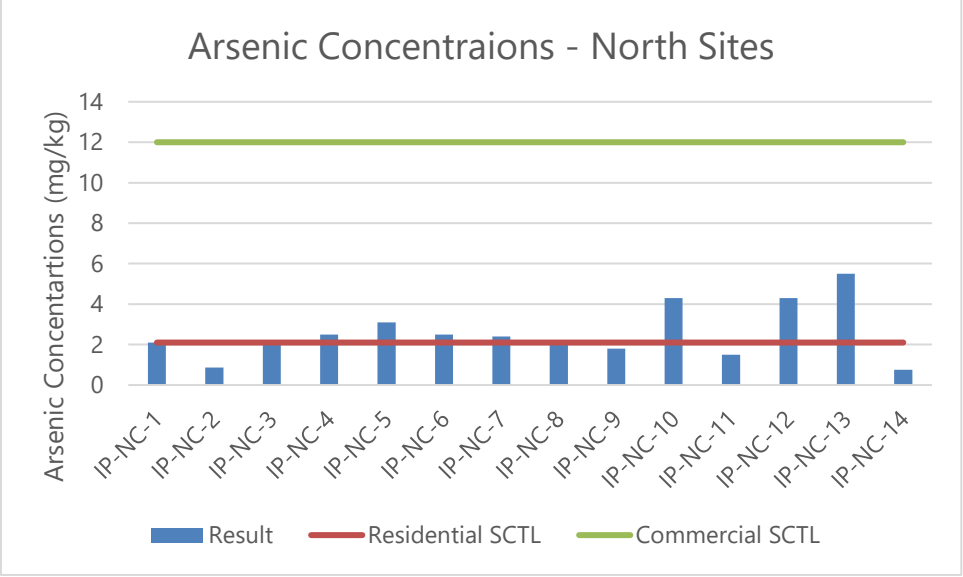


Figure 3: Arsenic Concentrations within Sediment Samples Collected from the Northern and Central Channels of Isle of Palms Project Area (shown in mg/kg).

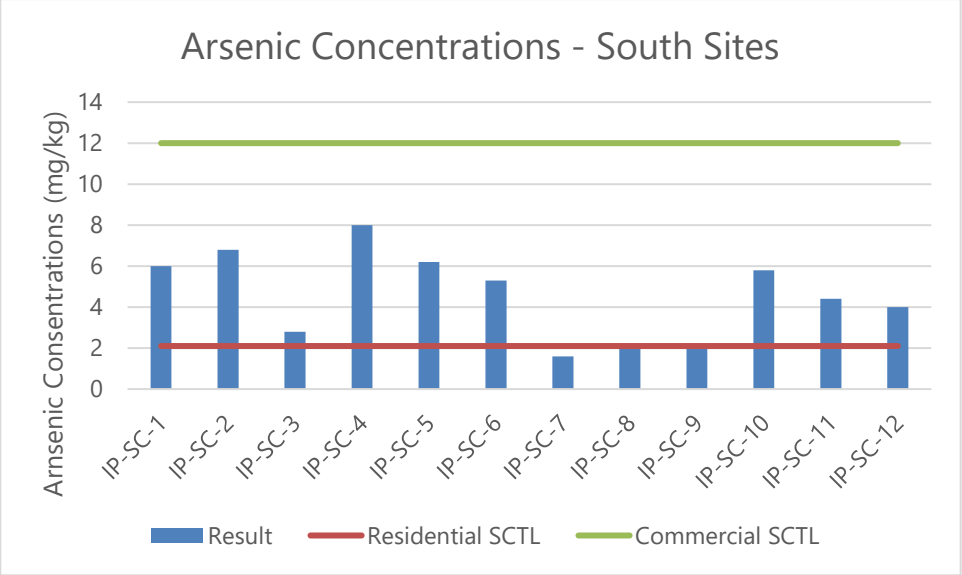


Figure 4 – Arsenic Concentrations within Sediment Samples Collected from the Southern Channels of Isle of Palms Project Area (shown in mg/kg).

Sediment Characterization Testing (Optional)

On March 3rd and 4th, 2020, Wood also collected via a steel piston tube sediment sampler an additional twenty-six sediment samples for suggested, but optional, sediment characterization testing (**Task 3B** of the referenced scope of services), which would also be performed by Wood. Implementation of the additional testing is pending approval by the IOPSD Board of Supervisors.

The tests to be performed by Wood would include grain-size distribution (per the United Classification System), percent of fine-grained material (passing No. 200 sieve), silt and clay content, water content, Atterberg limits, and organic content. Wood proposes to conduct the laboratory tests in general accordance with ASTM or other widely accepted standards.

If IOPSD authorizes the optional sediment characterization testing, Wood's registered geotechnical professional engineer will direct and supervise our testing services. A technical memorandum that describes our exploration and recommendations will be provided. This technical memorandum will include the following:

1) A brief review of our test procedures and the results of all laboratory tests conducted, including a plan view illustration of the location of each sample and the logs of each sample.

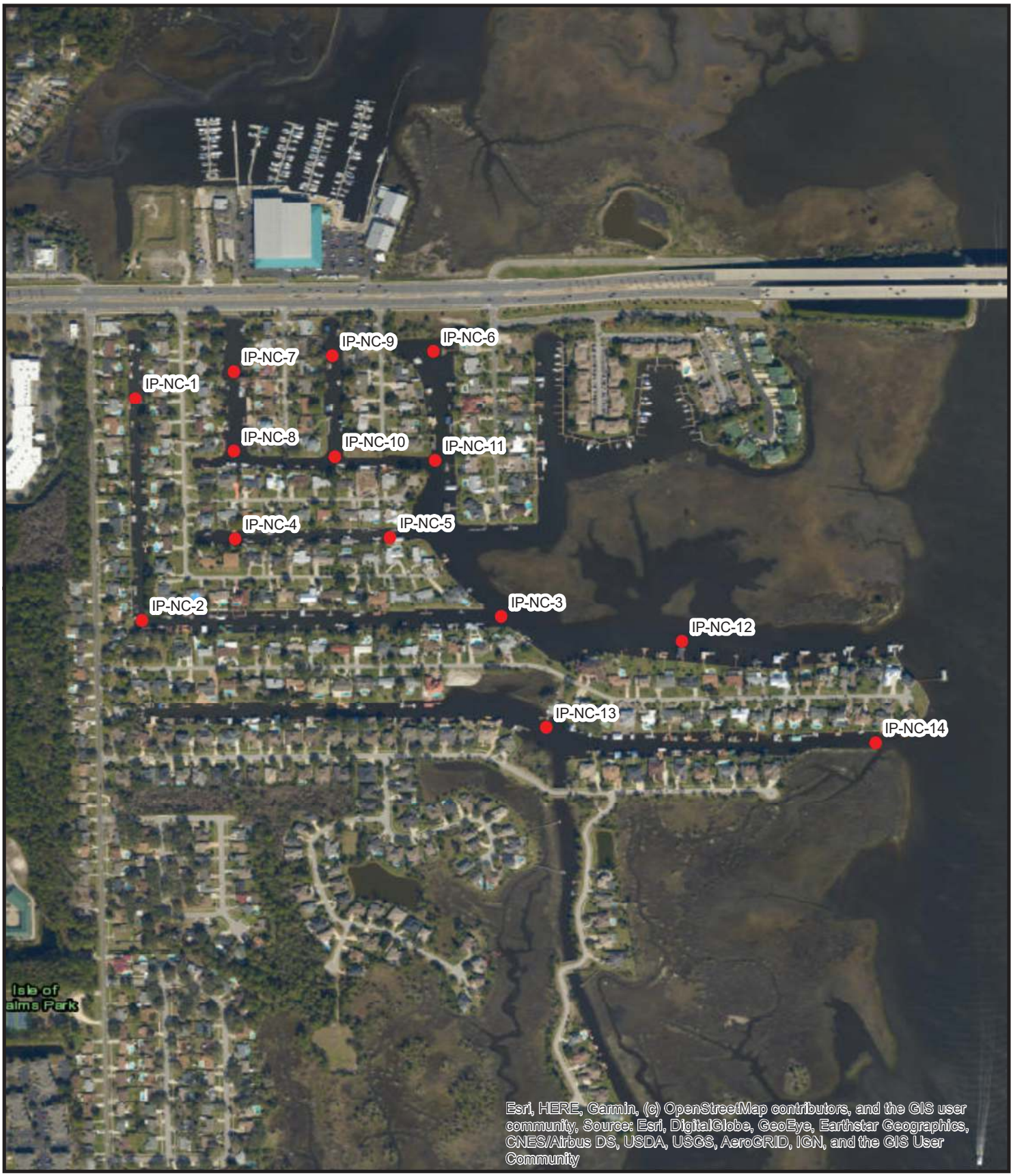
2) General, qualitative evaluation of the reusability of the materials to be dredged based on the results of the laboratory testing

3) Figures and logs showing the sampling locations

4) Results of all physical analysis tests performed

Conclusion and Recommendations:

In conclusion, no sediment chemistry sample results exceeded the commercial/industrial SCTL limits, as established by the FDEP Chapter 62-777 (FAC). Therefore these same results indicate the suitability of the dredged sediments for placement into the HWSD Reed Island DMMA.



Notes:

1- Project No.: 6735179416.03

2- Data Source - ESRI Basemap

3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 3/18/2020
Revised:EO
Checked By: LD

Explanation of Features

Sediment Samples

N

510 255 0 510
Feet

wood.

Figure 1
Sediment Sample Locations
North Sites
Isle of Palms Dedging
Jacksonville, Florida

Path: C:\Users\erik.oij\Desktop\Isle of Palms\SediemtSamples.mxd

Notes:

1- Project No.: 6735179416.03

2- Data Source - ESRI Basemap

3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 3/18/2020
Revised:EO
Checked By: LD

Explanation of Features

N

Sediment Samples

350 175 0 350
Feet

wood.

Figure 2
Sediment Sample Locations
South Sites
Isle of Palms Dedging
Jacksonville, Florida

Path: C:\Users\erik.oij\Desktop\Isle of Palms\SediemtSamples.mxd

Wood respectfully recommends that the HWSD accept this dredged material for placement within Reed Island DMMA, which is authorized to received dredged material that does not exceed the commercial/industrial SCTL limits as established by the FDEP.

Also, Wood recommends to the IOPSD that they proceed with sediment characterization testing as outline in **Task 3B** prior to soliciting bids, so that this vital information would be available to contractors.

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

March 11, 2020

Joseph Wagner
Wood PLC
6256 Greenland Rd
Jacksonville, FL 32258

RE: Workorder: J2003169 Isle of Palms Dredge

Dear Joseph Wagner:

Enclosed are the analytical results for sample(s) received by the laboratory on Wednesday, March 04, 2020. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

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

Sincerely,

Jerry Allen - Project Manager
JAllen@aellab.com

Enclosures

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

SAMPLE SUMMARY

Workorder: J2003169 Isle of Palms Dredge

Lab ID	Sample ID	Matrix	Date Collected	Date Received
J2003169001	IP-NC-1	Soil	3/3/2020 16:20	3/4/2020 15:00
J2003169002	IP-NC-2	Soil	3/3/2020 16:48	3/4/2020 15:00
J2003169003	IP-NC-3	Soil	3/3/2020 17:00	3/4/2020 15:00
J2003169004	IP-NC-4	Soil	3/3/2020 17:15	3/4/2020 15:00
J2003169005	IP-NC-5	Soil	3/3/2020 17:25	3/4/2020 15:00
J2003169006	IP-NC-6	Soil	3/3/2020 17:39	3/4/2020 15:00
J2003169007	IP-NC-7	Soil	3/3/2020 18:00	3/4/2020 15:00
J2003169008	IP-NC-8	Soil	3/3/2020 18:10	3/4/2020 15:00
J2003169009	IP-NC-9	Soil	3/4/2020 08:45	3/4/2020 15:00
J2003169010	IP-NC-10	Soil	3/4/2020 08:57	3/4/2020 15:00
J2003169011	IP-NC-11	Soil	3/4/2020 09:10	3/4/2020 15:00
J2003169012	IP-NC-12	Soil	3/4/2020 09:30	3/4/2020 15:00
J2003169013	IP-NC-13	Soil	3/4/2020 09:50	3/4/2020 15:00
J2003169014	IP-NC-14	Soil	3/4/2020 10:10	3/4/2020 15:00
J2003169015	IP-SC-1	Soil	3/4/2020 10:50	3/4/2020 15:00
J2003169016	IP-SC-2	Soil	3/4/2020 11:05	3/4/2020 15:00
J2003169017	IP-SC-3	Soil	3/4/2020 11:20	3/4/2020 15:00
J2003169018	IP-SC-4	Soil	3/4/2020 11:34	3/4/2020 15:00
J2003169019	IP-SC-5	Soil	3/4/2020 11:50	3/4/2020 15:00
J2003169020	IP-SC-6	Soil	3/4/2020 12:05	3/4/2020 15:00
J2003169021	IP-SC-7	Soil	3/4/2020 12:20	3/4/2020 15:00
J2003169022	IP-SC-8	Soil	3/4/2020 12:35	3/4/2020 15:00
J2003169023	IP-SC-9	Soil	3/4/2020 12:46	3/4/2020 15:00
J2003169024	IP-SC-10	Soil	3/4/2020 13:00	3/4/2020 15:00
J2003169025	IP-SC-11	Soil	3/4/2020 13:12	3/4/2020 15:00
J2003169026	IP-SC-12	Soil	3/4/2020 13:30	3/4/2020 15:00

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169001** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-1** Date Collected: 03/03/20 16:20

Results for sample J2003169001 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.1**	**I**	**mg/Kg**	**1**	6.8	1.7	3/9/2020 12:47	J
Barium	**21**		**mg/Kg**	**1**	0.68	0.17	3/9/2020 12:47	J
Cadmium	**0.17**	**U,J4**	**mg/Kg**	**1**	0.68	0.17	3/9/2020 12:47	J
Chromium	**32**		**mg/Kg**	**1**	1.4	0.34	3/9/2020 12:47	J
Lead	**23**		**mg/Kg**	**1**	2.7	0.68	3/9/2020 12:47	J
Selenium	**3.4**	**U**	**mg/Kg**	**1**	14	3.4	3/9/2020 12:47	J
Silver	**0.68**	**U**	**mg/Kg**	**1**	2.7	0.68	3/9/2020 12:47	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.13**		**mg/Kg**	**1**	0.017	0.0024	3/9/2020 14:07	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**71**		**%**	**1**	0.0010	0.0010	3/9/2020 16:51	J

Lab ID: **J2003169002** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-2** Date Collected: 03/03/20 16:48

Results for sample J2003169002 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**0.87**	**I**	**mg/Kg**	**1**	3.3	0.83	3/9/2020 13:09	J
Barium	**8.6**		**mg/Kg**	**1**	0.33	0.083	3/9/2020 13:09	J
Cadmium	**0.083**	**U**	**mg/Kg**	**1**	0.33	0.083	3/9/2020 13:09	J
Chromium	**8.4**		**mg/Kg**	**1**	0.67	0.17	3/9/2020 13:09	J
Lead	**7.0**		**mg/Kg**	**1**	1.3	0.33	3/9/2020 13:09	J
Selenium	**1.7**	**U**	**mg/Kg**	**1**	6.7	1.7	3/9/2020 13:09	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169002** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-2** Date Collected: 03/03/20 16:48

Results for sample J2003169002 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.33**	**U**	**mg/Kg**	**1**	1.3	0.33	3/9/2020 13:09	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.040**		**mg/Kg**	**1**	0.0078	0.0011	3/9/2020 14:10	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**42**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169003** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-3** Date Collected: 03/03/20 17:00

Results for sample J2003169003 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.0**	**I**	**mg/Kg**	**1**	5.8	1.5	3/9/2020 13:13	J
Barium	**12**		**mg/Kg**	**1**	0.58	0.15	3/9/2020 13:13	J
Cadmium	**0.15**	**U**	**mg/Kg**	**1**	0.58	0.15	3/9/2020 13:13	J
Chromium	**17**		**mg/Kg**	**1**	1.2	0.29	3/9/2020 13:13	J
Lead	**16**		**mg/Kg**	**1**	2.3	0.58	3/9/2020 13:13	J
Selenium	**2.9**	**U**	**mg/Kg**	**1**	12	2.9	3/9/2020 13:13	J
Silver	**0.58**	**U**	**mg/Kg**	**1**	2.3	0.58	3/9/2020 13:13	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.13**		**mg/Kg**	**1**	0.015	0.0020	3/9/2020 14:13	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**66**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169004** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-4** Date Collected: 03/03/20 17:15

Results for sample J2003169004 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.5**	**I**	**mg/Kg**	**1**	5.3	1.3	3/9/2020 13:18	J
Barium	**17**		**mg/Kg**	**1**	0.53	0.13	3/9/2020 13:18	J
Cadmium	**0.13**	**U**	**mg/Kg**	**1**	0.53	0.13	3/9/2020 13:18	J
Chromium	**21**		**mg/Kg**	**1**	1.1	0.26	3/9/2020 13:18	J
Lead	**18**		**mg/Kg**	**1**	2.1	0.53	3/9/2020 13:18	J
Selenium	**2.6**	**U**	**mg/Kg**	**1**	11	2.6	3/9/2020 13:18	J
Silver	**0.53**	**U**	**mg/Kg**	**1**	2.1	0.53	3/9/2020 13:18	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.20**		**mg/Kg**	**1**	0.012	0.0017	3/9/2020 14:15	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**63**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169005** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-5** Date Collected: 03/03/20 17:25

Results for sample J2003169005 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**3.1**	**I**	**mg/Kg**	**1**	5.6	1.4	3/9/2020 13:31	J
Barium	**13**		**mg/Kg**	**1**	0.56	0.14	3/9/2020 13:31	J
Cadmium	**0.14**	**U**	**mg/Kg**	**1**	0.56	0.14	3/9/2020 13:31	J
Chromium	**21**		**mg/Kg**	**1**	1.1	0.28	3/9/2020 13:31	J
Lead	**14**		**mg/Kg**	**1**	2.2	0.56	3/9/2020 13:31	J
Selenium	**2.8**	**U**	**mg/Kg**	**1**	11	2.8	3/9/2020 13:31	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169005** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-5** Date Collected: 03/03/20 17:25

Results for sample J2003169005 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.56**	**U**	**mg/Kg**	**1**	2.2	0.56	3/9/2020 13:31	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.090**		**mg/Kg**	**1**	0.013	0.0018	3/9/2020 14:18	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**65**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169006** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-6** Date Collected: 03/03/20 17:39

Results for sample J2003169006 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.5**	**I**	**mg/Kg**	**1**	7.9	2.0	3/9/2020 13:35	J
Barium	**23**		**mg/Kg**	**1**	0.79	0.20	3/9/2020 13:35	J
Cadmium	**0.20**	**U**	**mg/Kg**	**1**	0.79	0.20	3/9/2020 13:35	J
Chromium	**36**		**mg/Kg**	**1**	1.6	0.40	3/9/2020 13:35	J
Lead	**26**		**mg/Kg**	**1**	3.2	0.79	3/9/2020 13:35	J
Selenium	**4.0**	**U**	**mg/Kg**	**1**	16	4.0	3/9/2020 13:35	J
Silver	**0.79**	**U**	**mg/Kg**	**1**	3.2	0.79	3/9/2020 13:35	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.16**		**mg/Kg**	**1**	0.019	0.0027	3/9/2020 14:21	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**76**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169007** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-7** Date Collected: 03/03/20 18:00

Results for sample J2003169007 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.4**	**I**	**mg/Kg**	**1**	8.6	2.1	3/9/2020 13:40	J
Barium	**25**		**mg/Kg**	**1**	0.86	0.21	3/9/2020 13:40	J
Cadmium	**0.21**	**U**	**mg/Kg**	**1**	0.86	0.21	3/9/2020 13:40	J
Chromium	**37**		**mg/Kg**	**1**	1.7	0.43	3/9/2020 13:40	J
Lead	**33**		**mg/Kg**	**1**	3.4	0.86	3/9/2020 13:40	J
Selenium	**4.3**	**U**	**mg/Kg**	**1**	17	4.3	3/9/2020 13:40	J
Silver	**0.86**	**U**	**mg/Kg**	**1**	3.4	0.86	3/9/2020 13:40	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.20**		**mg/Kg**	**1**	0.020	0.0029	3/9/2020 14:30	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**77**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169008** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-8** Date Collected: 03/03/20 18:10

Results for sample J2003169008 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.0**	**I**	**mg/Kg**	**1**	5.3	1.3	3/9/2020 13:49	J
Barium	**14**		**mg/Kg**	**1**	0.53	0.13	3/9/2020 13:49	J
Cadmium	**0.13**	**U**	**mg/Kg**	**1**	0.53	0.13	3/9/2020 13:49	J
Chromium	**21**		**mg/Kg**	**1**	1.1	0.26	3/9/2020 13:49	J
Lead	**17**		**mg/Kg**	**1**	2.1	0.53	3/9/2020 13:49	J
Selenium	**2.6**	**U**	**mg/Kg**	**1**	11	2.6	3/9/2020 13:49	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169008** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-8** Date Collected: 03/03/20 18:10

Results for sample J2003169008 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.53**	**U**	**mg/Kg**	**1**	2.1	0.53	3/9/2020 13:49	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.11**		**mg/Kg**	**1**	0.012	0.0017	3/9/2020 14:33	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**63**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169009** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-9** Date Collected: 03/04/20 08:45

Results for sample J2003169009 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**1.8**	**U**	**mg/Kg**	**1**	7.2	1.8	3/9/2020 13:54	J
Barium	**20**		**mg/Kg**	**1**	0.72	0.18	3/9/2020 13:54	J
Cadmium	**0.18**	**U**	**mg/Kg**	**1**	0.72	0.18	3/9/2020 13:54	J
Chromium	**30**		**mg/Kg**	**1**	1.4	0.36	3/9/2020 13:54	J
Lead	**26**		**mg/Kg**	**1**	2.9	0.72	3/9/2020 13:54	J
Selenium	**3.6**	**U**	**mg/Kg**	**1**	14	3.6	3/9/2020 13:54	J
Silver	**0.72**	**U**	**mg/Kg**	**1**	2.9	0.72	3/9/2020 13:54	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.28**		**mg/Kg**	**1**	0.018	0.0025	3/9/2020 14:42	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**72**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169010** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-10** Date Collected: 03/04/20 08:57

Results for sample J2003169010 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**4.3**	**I**	**mg/Kg**	**1**	7.6	1.9	3/9/2020 13:58	J
Barium	**20**		**mg/Kg**	**1**	0.76	0.19	3/9/2020 13:58	J
Cadmium	**0.19**	**U**	**mg/Kg**	**1**	0.76	0.19	3/9/2020 13:58	J
Chromium	**32**		**mg/Kg**	**1**	1.5	0.38	3/9/2020 13:58	J
Lead	**23**		**mg/Kg**	**1**	3.0	0.76	3/9/2020 13:58	J
Selenium	**3.8**	**U**	**mg/Kg**	**1**	15	3.8	3/9/2020 13:58	J
Silver	**0.76**	**U**	**mg/Kg**	**1**	3.0	0.76	3/9/2020 13:58	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.13**		**mg/Kg**	**1**	0.019	0.0026	3/9/2020 14:57	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**74**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169011** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-11** Date Collected: 03/04/20 09:10

Results for sample J2003169011 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**1.5**	**U**	**mg/Kg**	**1**	6.0	1.5	3/9/2020 14:03	J
Barium	**17**		**mg/Kg**	**1**	0.60	0.15	3/9/2020 14:03	J
Cadmium	**0.15**	**U**	**mg/Kg**	**1**	0.60	0.15	3/9/2020 14:03	J
Chromium	**22**		**mg/Kg**	**1**	1.2	0.30	3/9/2020 14:03	J
Lead	**19**		**mg/Kg**	**1**	2.4	0.60	3/9/2020 14:03	J
Selenium	**3.0**	**U**	**mg/Kg**	**1**	12	3.0	3/9/2020 14:03	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169011** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-11** Date Collected: 03/04/20 09:10

Results for sample J2003169011 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.60**	**U**	**mg/Kg**	**1**	2.4	0.60	3/9/2020 14:03	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.18**		**mg/Kg**	**1**	0.015	0.0020	3/9/2020 15:06	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**67**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169012** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-12** Date Collected: 03/04/20 09:30

Results for sample J2003169012 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**4.3**	**I**	**mg/Kg**	**1**	7.9	2.0	3/9/2020 14:07	J
Barium	**15**		**mg/Kg**	**1**	0.79	0.20	3/9/2020 14:07	J
Cadmium	**0.20**	**U**	**mg/Kg**	**1**	0.79	0.20	3/9/2020 14:07	J
Chromium	**21**		**mg/Kg**	**1**	1.6	0.40	3/9/2020 14:07	J
Lead	**18**		**mg/Kg**	**1**	3.2	0.79	3/9/2020 14:07	J
Selenium	**4.0**	**U**	**mg/Kg**	**1**	16	4.0	3/9/2020 14:07	J
Silver	**0.79**	**U**	**mg/Kg**	**1**	3.2	0.79	3/9/2020 14:07	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.16**		**mg/Kg**	**1**	0.020	0.0028	3/9/2020 15:09	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**75**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169013** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-13** Date Collected: 03/04/20 09:50

Results for sample J2003169013 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**5.5**	**I**	**mg/Kg**	**1**	7.7	1.9	3/9/2020 14:11	J
Barium	**19**		**mg/Kg**	**1**	0.77	0.19	3/9/2020 14:11	J
Cadmium	**0.19**	**U**	**mg/Kg**	**1**	0.77	0.19	3/9/2020 14:11	J
Chromium	**31**		**mg/Kg**	**1**	1.5	0.39	3/9/2020 14:11	J
Lead	**21**		**mg/Kg**	**1**	3.1	0.77	3/9/2020 14:11	J
Selenium	**3.9**	**U**	**mg/Kg**	**1**	15	3.9	3/9/2020 14:11	J
Silver	**0.77**	**U**	**mg/Kg**	**1**	3.1	0.77	3/9/2020 14:11	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.094**		**mg/Kg**	**1**	0.018	0.0025	3/9/2020 15:12	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**75**		**%**	**1**	0.0010	0.0010	3/10/2020 13:16	J

Lab ID: **J2003169014** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-14** Date Collected: 03/04/20 10:10

Results for sample J2003169014 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**0.76**	**U**	**mg/Kg**	**1**	3.0	0.76	3/9/2020 14:16	J
Barium	**3.0**		**mg/Kg**	**1**	0.30	0.076	3/9/2020 14:16	J
Cadmium	**0.076**	**U**	**mg/Kg**	**1**	0.30	0.076	3/9/2020 14:16	J
Chromium	**3.6**		**mg/Kg**	**1**	0.61	0.15	3/9/2020 14:16	J
Lead	**2.8**		**mg/Kg**	**1**	1.2	0.30	3/9/2020 14:16	J
Selenium	**1.5**	**U**	**mg/Kg**	**1**	6.1	1.5	3/9/2020 14:16	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169014** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-NC-14** Date Collected: 03/04/20 10:10

Results for sample J2003169014 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.30**	**U**	**mg/Kg**	**1**	1.2	0.30	3/9/2020 14:16	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.0071**	**I**	**mg/Kg**	**1**	0.0073	0.0010	3/9/2020 15:15	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**36**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169015** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-1** Date Collected: 03/04/20 10:50

Results for sample J2003169015 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**6.0**	**I**	**mg/Kg**	**1**	8.5	2.1	3/9/2020 14:29	J
Barium	**19**		**mg/Kg**	**1**	0.85	0.21	3/9/2020 14:29	J
Cadmium	**0.21**	**U**	**mg/Kg**	**1**	0.85	0.21	3/9/2020 14:29	J
Chromium	**34**		**mg/Kg**	**1**	1.7	0.42	3/9/2020 14:29	J
Lead	**19**		**mg/Kg**	**1**	3.4	0.85	3/9/2020 14:29	J
Selenium	**4.2**	**U**	**mg/Kg**	**1**	17	4.2	3/9/2020 14:29	J
Silver	**0.85**	**U**	**mg/Kg**	**1**	3.4	0.85	3/9/2020 14:29	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.076**		**mg/Kg**	**1**	0.021	0.0029	3/9/2020 15:18	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**77**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169016** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-2** Date Collected: 03/04/20 11:05

Results for sample J2003169016 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**6.8**	**I**	**mg/Kg**	**1**	8.5	2.1	3/9/2020 14:33	J
Barium	**24**		**mg/Kg**	**1**	0.85	0.21	3/9/2020 14:33	J
Cadmium	**0.21**	**U**	**mg/Kg**	**1**	0.85	0.21	3/9/2020 14:33	J
Chromium	**40**		**mg/Kg**	**1**	1.7	0.42	3/9/2020 14:33	J
Lead	**23**		**mg/Kg**	**1**	3.4	0.85	3/9/2020 14:33	J
Selenium	**4.2**	**U**	**mg/Kg**	**1**	17	4.2	3/9/2020 14:33	J
Silver	**0.85**	**U**	**mg/Kg**	**1**	3.4	0.85	3/9/2020 14:33	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.090**		**mg/Kg**	**1**	0.021	0.0030	3/9/2020 15:21	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**77**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169017** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-3** Date Collected: 03/04/20 11:20

Results for sample J2003169017 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.8**	**I**	**mg/Kg**	**1**	4.9	1.2	3/9/2020 14:38	J
Barium	**7.3**		**mg/Kg**	**1**	0.49	0.12	3/9/2020 14:38	J
Cadmium	**0.12**	**U**	**mg/Kg**	**1**	0.49	0.12	3/9/2020 14:38	J
Chromium	**12**		**mg/Kg**	**1**	0.98	0.25	3/9/2020 14:38	J
Lead	**7.8**		**mg/Kg**	**1**	2.0	0.49	3/9/2020 14:38	J
Selenium	**2.5**	**U**	**mg/Kg**	**1**	9.8	2.5	3/9/2020 14:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169017** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-3** Date Collected: 03/04/20 11:20

Results for sample J2003169017 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.49**	**U**	**mg/Kg**	**1**	2.0	0.49	3/9/2020 14:38	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.047**		**mg/Kg**	**1**	0.012	0.0017	3/9/2020 15:24	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**60**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169018** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-4** Date Collected: 03/04/20 11:34

Results for sample J2003169018 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**8.0**	**I**	**mg/Kg**	**1**	9.4	2.4	3/9/2020 14:42	J
Barium	**21**		**mg/Kg**	**1**	0.94	0.24	3/9/2020 14:42	J
Cadmium	**0.24**	**U**	**mg/Kg**	**1**	0.94	0.24	3/9/2020 14:42	J
Chromium	**36**		**mg/Kg**	**1**	1.9	0.47	3/9/2020 14:42	J
Lead	**22**		**mg/Kg**	**1**	3.8	0.94	3/9/2020 14:42	J
Selenium	**4.7**	**U**	**mg/Kg**	**1**	19	4.7	3/9/2020 14:42	J
Silver	**0.94**	**U**	**mg/Kg**	**1**	3.8	0.94	3/9/2020 14:42	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.10**		**mg/Kg**	**1**	0.024	0.0033	3/9/2020 15:27	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**79**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169019** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-5** Date Collected: 03/04/20 11:50

Results for sample J2003169019 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**6.2**	**I**	**mg/Kg**	**1**	7.5	1.9	3/9/2020 14:47	J
Barium	**20**		**mg/Kg**	**1**	0.75	0.19	3/9/2020 14:47	J
Cadmium	**0.19**	**U**	**mg/Kg**	**1**	0.75	0.19	3/9/2020 14:47	J
Chromium	**35**		**mg/Kg**	**1**	1.5	0.38	3/9/2020 14:47	J
Lead	**18**		**mg/Kg**	**1**	3.0	0.75	3/9/2020 14:47	J
Selenium	**3.8**	**U**	**mg/Kg**	**1**	15	3.8	3/9/2020 14:47	J
Silver	**0.75**	**U**	**mg/Kg**	**1**	3.0	0.75	3/9/2020 14:47	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.096**		**mg/Kg**	**1**	0.019	0.0026	3/9/2020 15:30	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**74**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169020** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-6** Date Collected: 03/04/20 12:05

Results for sample J2003169020 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**5.3**	**I**	**mg/Kg**	**1**	8.9	2.2	3/9/2020 14:51	J
Barium	**19**		**mg/Kg**	**1**	0.89	0.22	3/9/2020 14:51	J
Cadmium	**0.22**	**U**	**mg/Kg**	**1**	0.89	0.22	3/9/2020 14:51	J
Chromium	**32**		**mg/Kg**	**1**	1.8	0.44	3/9/2020 14:51	J
Lead	**19**		**mg/Kg**	**1**	3.6	0.89	3/9/2020 14:51	J
Selenium	**4.4**	**U**	**mg/Kg**	**1**	18	4.4	3/9/2020 14:51	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169020** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-6** Date Collected: 03/04/20 12:05

Results for sample J2003169020 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.89**	**U**	**mg/Kg**	**1**	3.6	0.89	3/9/2020 14:51	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.11**		**mg/Kg**	**1**	0.022	0.0030	3/9/2020 15:33	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**78**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169021** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-7** Date Collected: 03/04/20 12:20

Results for sample J2003169021 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**1.6**	**U**	**mg/Kg**	**1**	6.5	1.6	3/9/2020 15:04	J
Barium	**17**		**mg/Kg**	**1**	0.65	0.16	3/9/2020 15:04	J
Cadmium	**0.16**	**U,J4**	**mg/Kg**	**1**	0.65	0.16	3/9/2020 15:04	J
Chromium	**27**		**mg/Kg**	**1**	1.3	0.32	3/9/2020 15:04	J
Lead	**19**		**mg/Kg**	**1**	2.6	0.65	3/9/2020 15:04	J
Selenium	**3.2**	**U**	**mg/Kg**	**1**	13	3.2	3/9/2020 15:04	J
Silver	**0.65**	**U**	**mg/Kg**	**1**	2.6	0.65	3/9/2020 15:04	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.11**		**mg/Kg**	**1**	0.016	0.0022	3/9/2020 15:41	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**69**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169022** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-8** Date Collected: 03/04/20 12:35

Results for sample J2003169022 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.2**	**I**	**mg/Kg**	**1**	6.8	1.7	3/9/2020 15:35	J
Barium	**16**		**mg/Kg**	**1**	0.68	0.17	3/9/2020 15:35	J
Cadmium	**0.17**	**U**	**mg/Kg**	**1**	0.68	0.17	3/9/2020 15:35	J
Chromium	**27**		**mg/Kg**	**1**	1.4	0.34	3/9/2020 15:35	J
Lead	**14**		**mg/Kg**	**1**	2.7	0.68	3/9/2020 15:35	J
Selenium	**3.4**	**U**	**mg/Kg**	**1**	14	3.4	3/9/2020 15:35	J
Silver	**0.68**	**U**	**mg/Kg**	**1**	2.7	0.68	3/9/2020 15:35	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.078**		**mg/Kg**	**1**	0.016	0.0023	3/9/2020 15:44	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**71**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169023** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-9** Date Collected: 03/04/20 12:46

Results for sample J2003169023 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**2.0**	**U**	**mg/Kg**	**1**	8.2	2.0	3/9/2020 15:39	J
Barium	**15**		**mg/Kg**	**1**	0.82	0.20	3/9/2020 15:39	J
Cadmium	**0.20**	**U**	**mg/Kg**	**1**	0.82	0.20	3/9/2020 15:39	J
Chromium	**22**		**mg/Kg**	**1**	1.6	0.41	3/9/2020 15:39	J
Lead	**14**		**mg/Kg**	**1**	3.3	0.82	3/9/2020 15:39	J
Selenium	**4.1**	**U**	**mg/Kg**	**1**	16	4.1	3/9/2020 15:39	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169023** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-9** Date Collected: 03/04/20 12:46

Results for sample J2003169023 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.82**	**U**	**mg/Kg**	**1**	3.3	0.82	3/9/2020 15:39	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.098**		**mg/Kg**	**1**	0.019	0.0026	3/9/2020 15:47	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**76**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169024** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-10** Date Collected: 03/04/20 13:00

Results for sample J2003169024 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**5.8**	**I**	**mg/Kg**	**1**	8.6	2.1	3/9/2020 15:44	J
Barium	**22**		**mg/Kg**	**1**	0.86	0.21	3/9/2020 15:44	J
Cadmium	**0.21**	**U**	**mg/Kg**	**1**	0.86	0.21	3/9/2020 15:44	J
Chromium	**43**		**mg/Kg**	**1**	1.7	0.43	3/9/2020 15:44	J
Lead	**20**		**mg/Kg**	**1**	3.4	0.86	3/9/2020 15:44	J
Selenium	**4.3**	**U**	**mg/Kg**	**1**	17	4.3	3/9/2020 15:44	J
Silver	**0.86**	**U**	**mg/Kg**	**1**	3.4	0.86	3/9/2020 15:44	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.12**		**mg/Kg**	**1**	0.020	0.0027	3/9/2020 15:50	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**77**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169025** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-11** Date Collected: 03/04/20 13:12

Results for sample J2003169025 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**4.4**	**I**	**mg/Kg**	**1**	8.8	2.2	3/9/2020 15:48	J
Barium	**21**		**mg/Kg**	**1**	0.88	0.22	3/9/2020 15:48	J
Cadmium	**0.22**	**U**	**mg/Kg**	**1**	0.88	0.22	3/9/2020 15:48	J
Chromium	**39**		**mg/Kg**	**1**	1.8	0.44	3/9/2020 15:48	J
Lead	**19**		**mg/Kg**	**1**	3.5	0.88	3/9/2020 15:48	J
Selenium	**4.4**	**U**	**mg/Kg**	**1**	18	4.4	3/9/2020 15:48	J
Silver	**0.88**	**U**	**mg/Kg**	**1**	3.5	0.88	3/9/2020 15:48	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.10**		**mg/Kg**	**1**	0.022	0.0030	3/9/2020 15:53	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**78**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

Lab ID: **J2003169026** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-12** Date Collected: 03/04/20 13:30

Results for sample J2003169026 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
METALS								
Analysis Desc: SW846 6010B Analysis,Soils	Preparation Method: SW-846 3050B Analytical Method: SW-846 6010							
Arsenic	**4.0**	**I**	**mg/Kg**	**1**	8.4	2.1	3/9/2020 15:53	J
Barium	**16**		**mg/Kg**	**1**	0.84	0.21	3/9/2020 15:53	J
Cadmium	**0.21**	**U**	**mg/Kg**	**1**	0.84	0.21	3/9/2020 15:53	J
Chromium	**26**		**mg/Kg**	**1**	1.7	0.42	3/9/2020 15:53	J
Lead	**15**		**mg/Kg**	**1**	3.4	0.84	3/9/2020 15:53	J
Selenium	**4.2**	**U**	**mg/Kg**	**1**	17	4.2	3/9/2020 15:53	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS

Workorder: J2003169 Isle of Palms Dredge

Lab ID: **J2003169026** Date Received: 03/04/20 15:00 Matrix: Soil

Sample ID: **IP-SC-12** Date Collected: 03/04/20 13:30

Results for sample J2003169026 are reported on a dry weight basis.

Sample Description: Location:

Parameters	Results	Qual	Units	DF	Adjusted PQL	Adjusted MDL	Analyzed	Lab
Silver	**0.84**	**U**	**mg/Kg**	**1**	3.4	0.84	3/9/2020 15:53	J
Analysis Desc: SW846 7471A Analysis, Soil	Preparation Method: SW-846 7471A Analytical Method: SW-846 7471A							
Mercury	**0.11**		**mg/Kg**	**1**	0.021	0.0029	3/9/2020 15:56	J
METALS								
Analysis Desc: Percent Solids,SM2540G,Soil	Analytical Method: SM 2540G							
Percent Moisture	**77**		**%**	**1**	0.0010	0.0010	3/10/2020 13:38	J

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

ANALYTICAL RESULTS QUALIFIERS

Workorder: J2003169 Isle of Palms Dredge

PARAMETER QUALIFIERS

U	The compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J4	Estimated Result

LAB QUALIFIERS

J	DOH Certification #E82574(AEL-JAX)(FL NELAC Certification)

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA

Workorder: J2003169 Isle of Palms Dredge

QC Batch: DGMj/1240 Analysis Method: SW-846 7471A
QC Batch Method: SW-846 7471A Prepared: 03/09/2020 12:00
Associated Lab Samples: J2003169001, J2003169002, J2003169003, J2003169004, J2003169005, J2003169006, J2003169007, J2003169008

METHOD BLANK: 3407354

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	mg/Kg	0.00070	0.00070	U

LABORATORY CONTROL SAMPLE: 3407355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Mercury	mg/Kg	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3407356 3407357 Original: M2001323001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Mercury	mg/Kg	0.0092	0.092	0.11	0.10	98	95	80-120	2	20	

QC Batch: DGMj/1241 Analysis Method: SW-846 7471A
QC Batch Method: SW-846 7471A Prepared: 03/09/2020 12:00
Associated Lab Samples: J2003169009, J2003169010, J2003169011, J2003169012, J2003169013, J2003169014, J2003169015, J2003169016,

METHOD BLANK: 3407358

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Mercury	mg/Kg	0.00070	0.00070	U

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA

Workorder: J2003169 Isle of Palms Dredge

LABORATORY CONTROL SAMPLE: 3407359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Mercury	mg/Kg	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3407360 3407361 Original: J2003169009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Mercury	mg/Kg	0.078	0.095	0.59	0.49	88	62	80-120	18	20	

QC Batch: DGMj/1244 Analysis Method: SW-846 6010

QC Batch Method: SW-846 3050B Prepared: 03/06/2020 11:40

Associated Lab Samples: J2003169001, J2003169002, J2003169003, J2003169004, J2003169005, J2003169006, J2003169007, J2003169008,

METHOD BLANK: 3407463

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Silver	mg/Kg	0.20	0.20	U
Arsenic	mg/Kg	0.50	0.50	U
Barium	mg/Kg	0.050	0.050	U
Cadmium	mg/Kg	0.050	0.050	U
Chromium	mg/Kg	0.10	0.10	U
Lead	mg/Kg	0.20	0.20	U
Selenium	mg/Kg	1.0	1.0	U

LABORATORY CONTROL SAMPLE: 3407464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Silver	mg/Kg	4	3.4	85	80-120	
Arsenic	mg/Kg	10	8.9	89	80-120	
Barium	mg/Kg	1	0.84	84	80-120	
Cadmium	mg/Kg	1	0.90	91	80-120	
Chromium	mg/Kg	2	1.6	82	80-120	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA

Workorder: J2003169 Isle of Palms Dredge

LABORATORY CONTROL SAMPLE: 3407464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/Kg	4	3.7	92	80-120	
Selenium	mg/Kg	20	18	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3407465 3407466 Original: J2003169001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Silver	mg/Kg	0	4	12	12	88	87	75-125	3	20	
Arsenic	mg/Kg	0.61	10	33	31	89	85	75-125	6	20	
Barium	mg/Kg	6	1	29	28	260	232	75-125	4	20	
Cadmium	mg/Kg	0	1	1.9	1.8	55	55	75-125	2	20	
Chromium	mg/Kg	9.4	2	45	44	187	171	75-125	3	20	
Lead	mg/Kg	6.8	4	37	36	104	94	75-125	5	20	
Selenium	mg/Kg	0	20	59	56	86	84	75-125	5	20	

QC Batch: DGMj/1245 Analysis Method: SW-846 6010

QC Batch Method: SW-846 3050B Prepared: 03/06/2020 11:40

Associated Lab Samples: J2003169021, J2003169022, J2003169023, J2003169024, J2003169025, J2003169026

METHOD BLANK: 3407468

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
METALS				
Silver	mg/Kg	0.20	0.20	U
Arsenic	mg/Kg	0.50	0.50	U
Barium	mg/Kg	0.050	0.050	U
Cadmium	mg/Kg	0.050	0.050	U
Chromium	mg/Kg	0.10	0.10	U
Lead	mg/Kg	0.20	0.20	U
Selenium	mg/Kg	1.0	1.0	U

Advanced Environmental Laboratories, Inc.
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA

Workorder: J2003169 Isle of Palms Dredge

LABORATORY CONTROL SAMPLE: 3407469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
METALS						
Silver	mg/Kg	4	3.4	86	80-120	
Arsenic	mg/Kg	10	8.5	85	80-120	
Barium	mg/Kg	1	0.85	85	80-120	
Cadmium	mg/Kg	1	0.88	88	80-120	
Chromium	mg/Kg	2	1.7	84	80-120	
Lead	mg/Kg	4	3.6	91	80-120	
Selenium	mg/Kg	20	17	85	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3407470 3407471 Original: J2003169021

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
METALS											
Silver	mg/Kg	0	4	11	12	87	89	75-125	2	20	
Arsenic	mg/Kg	0.43	10	28	30	86	91	75-125	6	20	
Barium	mg/Kg	5.2	1	25	25	232	243	75-125	1	20	
Cadmium	mg/Kg	0	1	1.8	1.9	56	58	75-125	4	20	
Chromium	mg/Kg	8.2	2	38	38	168	171	75-125	1	20	
Lead	mg/Kg	5.8	4	29	28	77	68	75-125	4	20	
Selenium	mg/Kg	0	20	55	57	85	88	75-125	3	20	

CERTIFICATE OF ANALYSIS

Advanced Environmental Laboratories, Inc.

Advanced Environmental Laboratories, Inc
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J2003169 Isle of Palms Dredge

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J2003169001	IP-NC-1	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169002	IP-NC-2	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169003	IP-NC-3	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169004	IP-NC-4	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169005	IP-NC-5	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169006	IP-NC-6	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169007	IP-NC-7	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169008	IP-NC-8	SW-846 7471A	DGMj/1240	SW-846 7471A	CVAj/1050
J2003169009	IP-NC-9	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169010	IP-NC-10	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169011	IP-NC-11	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169012	IP-NC-12	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169013	IP-NC-13	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169014	IP-NC-14	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169015	IP-SC-1	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169016	IP-SC-2	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169017	IP-SC-3	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169018	IP-SC-4	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169019	IP-SC-5	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169020	IP-SC-6	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169021	IP-SC-7	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169022	IP-SC-8	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169023	IP-SC-9	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169024	IP-SC-10	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169025	IP-SC-11	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169026	IP-SC-12	SW-846 7471A	DGMj/1241	SW-846 7471A	CVAj/1051
J2003169001	IP-NC-1	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169002	IP-NC-2	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169003	IP-NC-3	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169004	IP-NC-4	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169005	IP-NC-5	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169006	IP-NC-6	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119

Advanced Environmental Laboratories, Inc.
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J2003169 Isle of Palms Dredge

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J2003169007	IP-NC-7	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169008	IP-NC-8	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169009	IP-NC-9	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169010	IP-NC-10	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169011	IP-NC-11	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169012	IP-NC-12	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169013	IP-NC-13	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169014	IP-NC-14	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169015	IP-SC-1	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169016	IP-SC-2	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169017	IP-SC-3	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169018	IP-SC-4	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169019	IP-SC-5	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169020	IP-SC-6	SW-846 3050B	DGMj/1244	SW-846 6010	ICPj/1119
J2003169021	IP-SC-7	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169022	IP-SC-8	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169023	IP-SC-9	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169024	IP-SC-10	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169025	IP-SC-11	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169026	IP-SC-12	SW-846 3050B	DGMj/1245	SW-846 6010	ICPj/1118
J2003169001	IP-NC-1			SM 2540G	WCAj/1577
J2003169002	IP-NC-2			SM 2540G	WCAj/1586
J2003169003	IP-NC-3			SM 2540G	WCAj/1586
J2003169004	IP-NC-4			SM 2540G	WCAj/1586
J2003169005	IP-NC-5			SM 2540G	WCAj/1586
J2003169006	IP-NC-6			SM 2540G	WCAj/1586
J2003169007	IP-NC-7			SM 2540G	WCAj/1586
J2003169008	IP-NC-8			SM 2540G	WCAj/1586
J2003169009	IP-NC-9			SM 2540G	WCAj/1586
J2003169010	IP-NC-10			SM 2540G	WCAj/1586
J2003169011	IP-NC-11			SM 2540G	WCAj/1586

Advanced Environmental Laboratories, Inc.
6681 Southpoint Pkwy Jacksonville, FL 32216
Payments: P.O. Box 551580 Jacksonville, FL 32255-1580
Phone: (904)363-9350
Fax: (904)363-9354

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: J2003169 Isle of Palms Dredge

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
J2003169012	IP-NC-12			SM 2540G	WCAj/1586
J2003169013	IP-NC-13			SM 2540G	WCAj/1586
J2003169014	IP-NC-14			SM 2540G	WCAj/1587
J2003169015	IP-SC-1			SM 2540G	WCAj/1587
J2003169016	IP-SC-2			SM 2540G	WCAj/1587
J2003169017	IP-SC-3			SM 2540G	WCAj/1587
J2003169018	IP-SC-4			SM 2540G	WCAj/1587
J2003169019	IP-SC-5			SM 2540G	WCAj/1587
J2003169020	IP-SC-6			SM 2540G	WCAj/1587
J2003169021	IP-SC-7			SM 2540G	WCAj/1587
J2003169022	IP-SC-8			SM 2540G	WCAj/1587
J2003169023	IP-SC-9			SM 2540G	WCAj/1587
J2003169024	IP-SC-10			SM 2540G	WCAj/1587
J2003169025	IP-SC-11			SM 2540G	WCAj/1587
J2003169026	IP-SC-12			SM 2540G	WCAj/1587

Advanced Environmental Laboratories, Inc.

☐ Altamonte Springs: 380 Northlake Blvd, Suite 1048 • Altamonte
☐ Fort Myers: 13100 Westlinks Terrace, Suite 10 • Fort Myers, FL 3
☐ Gainesville: 4965 SW 41st Blvd • Gainesville, FL 32608 • 352.377
☒ Jacksonville: 6681 Southpoint Pkwy • Jacksonville, FL 32216 • 9
☐ Miramar: 10200 USA Today Way • Miramar, FL 33025 • 954.889.2
☐ Tallahassee: 2639 North Monroe St, Suite D • Tallahassee, FL 3
☐ Tampa: 9610 Princess Palm Ave • Tampa, FL 33619 • 813.630.961

* J 2 0 0 3 1 6 9 *

Client Name:	Wood plc	Project Name:	Isle of Palms Dredge
Address:	6256 Greenland Rd	Project Number:	6735179416.03
	Jacksonville, FL 32258	PO Number:	
Phone:	904-391-3717	FDEP Facility No:	
FAX:			
Contact:	Joe Wagner		
Sampled By:	Erik Oi;		Jax Profile: 64254
Turn Around Time:	☒ STANDARD ☐ RUSH	Special Instructions:	
Page 1 of 3		☐ ADaPT ☐ EQuIS ☐ Other	

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: RCRA-8 Metals	Preservation	Field-Filtered?	LABORATORY I.D. NUMBER
IP-NC-1	Location # 1 North	G	3/3/20	1620	SO	1	6oz	1	Ice		001
IP-NC-2	Location # 2 North	G	3/3/20	1648	SO	1		1			002
IP-NC-3	Location # 3 North	G	3/3/20	1700	SO	1		1			003
IP-NC-4	Location # 4 North	G	3/3/20	1715	SO	1		1			004
IP-NC-5	Location # 5 North	G	3/3/20	1725	SO	1		1			005
IP-NC-6	Location # 6 North	G	3/3/20	1734	SO	1		1			006
IP-NC-7	Location # 7 North	C	3/3/20	1400	SO	1		1			007
IP-NC-8	Location # 8 North	C	3/3/20	1810	SO	1		1			008
IP-NC-9	Location # 9 North	C	3/4/20	0946	SO	1		1			009
IP-NC-10	Location # 10 North	C	3/4/20	0957	SO	1		1			010

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge

Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 10/15/2015 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Mike Triano	03/04/2020	1500		3420	1500
2						
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID:

Contact Person: Phone :

Supplier of Water:

Site-Address:

Advanced Environmental Laboratories, Inc.

☐ Altamonte Springs: 380 Northlake Blvd, Suite 1048 • Al
☐ Fort Myers: 13100 Westlinks Terrace, Suite 10 • Fort Mye
☐ Gainesville: 4965 SW 41st Blvd • Gainesville, FL 32608 •
☒ Jacksonville: 6681 Southpoint Pkwy • Jacksonville, FL 32
☐ Miramar: 10200 USA Today Way • Miramar, FL 33025 • 95
☐ Tallahassee: 2639 North Monrow St, Suite D • Tallahasse
☐ Tampa: 9610 Princess Palm Ave • Tampa, FL 33619 • 813.

* J 2 0 0 3 1 6 9 *

Client Name:	Wood plc	Project Name:	Isleat Palms Dredge
Address:	6256 Greenland Rd	Project Number:	6735179416.03
	Jacksonville, FL 32258	PO Number:	
Phone:	904-391-3717	FDEP Facility No:	
FAX:			
Contact:	Joe Wagner		
Sampled By:	Erik Oij		Jax Profile: 64254
Turn Around Time:	☒ STANDARD ☐ RUSH	Special Instructions:	
Page	2 of 3	☐ ADaPT ☐ EQuIS ☐ Other	

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	ANALYSIS REQUIRED: BOTTLE SIZE & TYPE	RCRA-8 Metals	Preservation	Field-Filtered?	LABORATORY I.D. NUMBER
								Glass			
								RCRA-8 Metals	Ice		
IP-NC-11	Location #11 North	C	03/04/2020	0910	Soil	1		1			011
IP-NC-12	Location #12 North	C		0938		1		1			012
IP-NC-13	Location #13 North	C		0950		1		1			013
IP-NC-14	Location #14 North	C		1010		1		1			014
IP-SC-1	Location #01 South	C		1050		1		1			015
IP-SC-2	Location #02 South	C		1105		1		1			016
IP-SC-3	Location #03 South	C		1120		1		1			017
IP-SC-4	Location #04 South	C		1134		1		1			018
IP-SC-5	Location #05 South	C		1150		1		1			019
IP-SC-6	Location #06 South	C		1205		1		1			020

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge

Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 10/15/2015 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Mike Triano	03/04/2020	1500	[signature]	3.4.20	1500
2						
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID:_____

Contact Person:_____ Phone :_____

Supplier of Water:_____

Site-Address:_____

J2003169

Advanced Environmental Laboratories, Inc.

- ☐ **Altamonte Springs:** 380 Northlake Blvd, Suite 1048 • Altamonte Springs, FL 32701 • 407.937.1594 • Lab ID E53076
- ☐ **Fort Myers:** 13100 Westlinks Terrace, Suite 10 • Fort Myers, FL 33913 • 239.674.8130 • Lab ID E84492
- ☐ **Gainesville:** 4965 SW 41st Blvd • Gainesville, FL 32608 • 352.377.2349 • Lab ID E82001
- ☒ **Jacksonville:** 6681 Southpoint Pkwy • Jacksonville, FL 32216 • 904.363.9350 • Lab ID E82574
- ☐ **Miramar:** 10200 USA Today Way • Miramar, FL 33025 • 954.889.2288 • Lab ID E82535
- ☐ **Tallahassee:** 2639 North Monrow St, Suite D • Tallahassee, FL 32303 • 850.219.6274 • Lab ID E811095
- ☐ **Tampa:** 9610 Princess Palm Ave • Tampa, FL 33619 • 813.630.9616 • Lab ID E84589

Client Name:	Wood plc	Project Name:	Isle of Palms Pool
Address:	6256 Greenland Rd	Project Number:	6735179416.03
	Jacksonville, FL 32258	PO Number:	
Phone:	904-391-3717	FDEP Facility No:	
FAX:			
Contact:	Joe Wagner		
Sampled By:	Erin Ci	**Jax Profile: 64254**	
Turn Around Time:	☒ STANDARD ☐ RUSH	Special Instructions:	
Page	3 of 3	☐ ADaPT ☐ EQuIS ☐ Other	

SAMPLE ID	SAMPLE DESCRIPTION	Grab Comp	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. COUNT	BOTTLE SIZE & TYPE	ANALYSIS REQUIRED: RCRA-8 Metals	Preservation	Field-Filtered?	LABORATORY I.D. NUMBER
IP-SC-7	South Location # 7	C	3/4/20	1220	SO	1	1 Glass	1	Ice		021
IP-SC-8	South Location # 8	C	3/4/20	1235	SO	1		1			022
IP-SC-9	South Location # 9	C	3/4/20	1246	SO	1		1			023
IP-SC-10	South Location # 10	C	3/4/20	1300	SO	1		1			024
IP-SC-11	South Location # 11	C	3/4/20	1312	SO	1		1			025
IP-SC-12	South Location # 12	C	3/4/20	1330	SO	1		1			026

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge

Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☒ Yes ☐ No ☒ Temp taken from sample ☐ Temp from blank ☐ Where required, pH checked Temperature when received 4 (in degrees celcius)

DCN: AD-051 Form last revised 10/15/2015 Device used for measuring Temp by unique identifier (circle IR temp gun used) J: 9A G: LT-1 LT-2 T: 10A A: 3A M: 3A S: 1V

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Mike Triano	03/04/2020	1500		3.4.20	1500
2						
3						
4						

FOR DRINKING WATER USE:

(When PWS Information not otherwise supplied) PWS ID:_____

Contact Person:_____ Phone :_____

Supplier of Water:_____

Site-Address:_____

Advanced Environmental Labs Inc

Client: Wood plc

Project name: Isle of Palms Dredge

Date/Time Rcvd: 3-4-2020 15:00

Log-In request number: J2003169

Received by: KE

Completed by: BA

Cooler/Shipping Information:

Courier: ☐ AEL ☒ Client ☐ UPS ☐ Blue Streak ☐ FedEx ☐ AES ☐ ASAP ☐ Other (describe): _____

Type: ☒ Cooler ☐ Box ☐ Other (describe) _____

Cooler temperature: Identify the cooler and document the temperature blank or ice water measurement

Cooler ID					
Temp (°C)	4°C				
Temp taken from	☑ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler	☐ Sample Bottle ☐ Cooler
Temp measured with	☑ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):	☐ IR gun S/N 9333779 ☐ Thermometer (enter ID):

Other Information:

Any discrepancies should be explained in the "Comments" section below.

CHECKLIST	YES	NO	NA
1. Were custody seals on shipping container(s) intact?			✓
2. Were custody papers properly included with samples?	✓		
3. Were custody papers properly filled out (ink, signed, match labels)?	✓		
4. Did all bottles arrive in good condition (unbroken)?	✓		
5. Were all bottle labels complete (sample #, date, signed, analysis, preservatives)?	✓		
6. Did the sample labels agree with the chain of custody?	✓		
7. Were correct bottles used for the tests indicated?	✓		
8. Were proper sample preservation techniques indicated on the label?	✓		
9. Were samples received within holding times?	✓		
10. Were all VOA vials free of the presence of air bubbles?	✓		
11. Have all Soil VOA Vials and Encores been placed in a freezer within 48 hours of collection?			✓
12. Were samples in direct contact with wet ice? If "No," check one: ☐ NO ICE ☐ BLUE ICE			✓
13. Was the cooler temperature less than 6°C?	✓		
14. Where pH preservation is required, are sample pHs checked and any anomalies recorded by Sample control? Are all <2 or >10? Note: VOA samples are checked by laboratory analysts.	✓		
			✓
15. Was sufficient sample volume provided to perform all tests?	✓		
16. If for Bacteriological testing, were containers supplied by AEL? (See QA officer if answer is no)			✓
17. Were all sample containers provided by AEL? (Other than Bacteriological)	✓		
18. Were samples accepted into the laboratory?	✓		
19. When necessary to split samples into other bottles, is it noted in the comments?	✓		

Comments: (Note all sample(s) and container (s)" with a "No" checklist response in this comment section)

DCN: AD-D048
Eff date 2/3/10, Last rev 9/6/16

Advanced Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J2003169

Client Name: Wood Plc

ProjectID: Isle of Palms Dredge

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SW-846 7471A

Preparation: SW-846 7471A

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The matrix spike duplicate recovery of mercury for J2003169009 was outside control criteria. Recoveries in the Laboratory Control Sample (LCS), Matrix Spike (MS) and %RPD were acceptable, which indicates the analytical batch was in control. No further corrective action was required.

E. Serial Diluion: All acceptance criteria were met.

F. Samples: Sample analyses proceeded normally.

G. Other:

Advanced Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J2003169

Client Name: Wood Plc

ProjectID: Isle of Palms Dredge

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SW-846 6010

Preparation: SW-846 3050B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The control criteria for matrix spike recoveries of Barium and Chromium for J2003169021 are not applicable. The analyte concentration in the sample was greater than 4 times the added spike concentrations, preventing accurate evaluation of the spike recovery. No further corrective action was required.

The matrix spike recovery of Cadmium for J2003169021 was outside control criteria due to the presence of target analytes in the sample. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The affected sample is qualified to indicate matrix interference.

The matrix spike Duplictae (MSD) recovery of Lead for J2003169021 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) and Matrix Spike (MS) were acceptable, which indicates the analytical batch was in control.The affected sample is qualified to indicate matrix interference.

E. Serial Diluion: All acceptance criteria were met.

F. Samples: Sample analyses proceeded normally.

G. Other:

Advanced Environmental Laboratories, Inc.

6681 Southpoint Parkway
Jacksonville, Florida 32216
Office (904) 363-9350
Fax (904) 363-9354

Project No.: J2003169

Client Name: Wood Plc

ProjectID: Isle of Palms Dredge

I. Receipt

No Exceptions were encountered.

II. Holding Times

Preparation: All holding times were met.

Analysis: All holding times were met.

III. Method

Analysis: SW-846 6010

Preparation: SW-846 3050B

IV. Preparation

Sample preparation proceeded normally.

V. Analysis

A. Calibration: All acceptance criteria were met.

B. Blanks: All acceptance criteria were met.

C. Duplicates: All acceptance criteria were met.

D. Spikes: The matrix spike recovery of Cadmium for J2003169001 was outside control criteria due to the presence of target analytes in the sample. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The affected sample is qualified to indicate matrix interference.

The control criteria for matrix spike recoveries of Barium and Chromium for J2003169001 are not applicable. The analyte concentration in the sample was greater than 4 times the added spike concentrations, preventing accurate evaluation of the spike recovery. No further corrective action was required.

E. Serial Diluion: All acceptance criteria were met.

F. Samples: Sample analyses proceeded normally.

G. Other: