9143 Philips Highway, Jacksonville, FL 32256 | 904-739-2277 | www.caslab.com

January 16, 2012 Service Request No: J1200100

Kirk Wills
Waste Services of Florida, Inc.
11500 43rd Street North
Clearwater, FL 33762

Laboratory Results for: JED SWDF

Dear Kirk,

Enclosed are the results of the sample(s) submitted to our laboratory November 11, 2011
For your reference, these analyses have been assigned our service request number **J1200100.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. If required, the laboratory can provide uncertainty measurements for each method employed in sample analysis; this uncertainty measurement would be generated using method validation studies and the laboratory's quality control data.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at CMyers@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company

Client: Waste Services of Florida, Inc.
Project: JED SWDF
Sample Matrix: Water

Service Request: J1200100
Date Received: 11/11/11

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Six water samples were received for analysis at Columbia Analytical Services on 11/11/11. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

General Chemistry Analyses:

Method SM 2320 B: The analysis of all samples for this SDG was initially performed past the recommended hold time. Due to an inadvertent Project Manager oversight, the samples were not originally logged in for Alkalinity analysis. The data is flagged to indicate the holding time violation.

Approved by _____ Date 1/16/2012

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Florida Department of Health	E82502	6/30/2012
Virginia Environmental Accreditation Program	460191	12/14/2012
Louisiana Department of Environmental Quality	02086	6/30/2012
Kentucky Division of Waste Management	63	7/5/2013
South Carolina Department of Health and Environmental Control	96021001	6/30/2012
Texas Commision on Environmental Quality	T104704197-09-TX	5/31/2012
Maine Department of Health and Human Services	2011006	2/3/2013
Department of Defense	66206	5/11/2012
Pennsylvania Department of Environmental Protection	68-04835	7/31/2012
New Jersey Department of Environmental Protection	FL019	6/30/2012

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Waste Services of Florida, Inc. **Service Request:** J1200100
Project: JED SWDF

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1200100-001	L-1	11/10/2011	1235
J1200100-002	L-2	11/10/2011	1125
J1200100-003	L-3	11/10/2011	1020
J1200100-004	L-4	11/10/2011	1325
J1200100-005	L-5	11/10/2011	1415
J1200100-006	L-7	11/10/2011	1520

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1200100
Project:	JED SWDF	**Date Collected:**	11/10/11
Sample Matrix:	Water	**Date Received:**	11/11/11
Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	NA

Alkalinity as CaCO3, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Q
L-1	J1200100-001	**4860**	**Q**	25	25	5	01/12/12 19:01	*
L-2	J1200100-002	**2830**	**Q**	25	25	5	01/12/12 19:19	*
L-3	J1200100-003	**4080**	**Q**	25	25	5	01/12/12 19:38	*
L-4	J1200100-004	**4060**	**Q**	25	25	5	01/12/12 20:14	*
L-5	J1200100-005	**3180**	**Q**	25	25	5	01/12/12 20:34	*
L-7	J1200100-006	**9.6**	**Q**	5.0	5.0	1	01/12/12 20:42	*
Method Blank	J1200100-MB	5.0	U	5.0	5.0	1	01/12/12 18:28	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1200100
Project:	JED SWDF	**Date Collected:**	11/10/11
Sample Matrix:	Water	**Date Received:**	11/11/11
Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	NA

Bicarbonate Alkalinity as CaCO3

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Q
L-1	J1200100-001	**4860**	**Q**	25	25	5	01/12/12 19:01	*
L-2	J1200100-002	**2830**	**Q**	25	25	5	01/12/12 19:19	*
L-3	J1200100-003	**4080**	**Q**	25	25	5	01/12/12 19:38	*
L-4	J1200100-004	**4060**	**Q**	25	25	5	01/12/12 20:14	*
L-5	J1200100-005	**3180**	**Q**	25	25	5	01/12/12 20:34	*
L-7	J1200100-006	**9.6**	**Q**	5.0	5.0	1	01/12/12 20:42	*
Method Blank	J1200100-MB	5.0	U	5.0	5.0	1	01/12/12 18:28	

COLUMBIA ANALYTICAL SERVICES, INC.
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Analytical Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1200100
Project:	JED SWDF	**Date Collected:**	11/10/11
Sample Matrix:	Water	**Date Received:**	11/11/11
Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	NA

Carbonate Alkalinity as CaCO3

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Q
L-1	J1200100-001	**25**	**QU**	25	25	5	01/12/12 19:01	*
L-2	J1200100-002	**25**	**QU**	25	25	5	01/12/12 19:19	*
L-3	J1200100-003	**25**	**QU**	25	25	5	01/12/12 19:38	*
L-4	J1200100-004	**25**	**QU**	25	25	5	01/12/12 20:14	*
L-5	J1200100-005	**25**	**QU**	25	25	5	01/12/12 20:34	*
L-7	J1200100-006	**5.0**	**QU**	5.0	5.0	1	01/12/12 20:42	*
Method Blank	J1200100-MB	5.0	U	5.0	5.0	1	01/12/12 18:28	

COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client:	Waste Services of Florida, Inc.	**Service Request:**	J1200100
Project	JED SWDF	**Date Collected:**	11/10/11
Sample Matrix:	Water	**Date Received:**	11/11/11
		Date Analyzed:	01/12/12

Replicate Sample Summary

Alkalinity Titration 20th Ed.

Sample Name:	L-7	**Units:**	mg/L
Lab Code:	J1200100-006	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample J1200100-006DUP Result	Average	RPD	RPD Limit
Alkalinity as CaCO3, Total	SM 2320 B	5.0	5.0	9.6	9.9	9.76	3	20
Bicarbonate Alkalinity as CaCO3	SM 2320 B	5.0	5.0	9.6	9.9	9.76	3	20
Carbonate Alkalinity as CaCO3	SM 2320 B	5.0	5.0	ND	5.0	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
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QA/QC Report

Client: Waste Services of Florida, Inc.
Project: JED SWDF
Sample Matrix: Water

Service Request: J1200100
Date Analyzed: 01/12/12

Lab Control Sample Summary
Alkalinity Titration 20th Ed.

Analysis Method: SM 2320 B

Units: mg/L
Basis: NA
Analysis Lot: 276163

Lab Control Sample
J1200100-LCS

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity as CaCO3, Total	255	250	102	85-115

Columbia Analytical Services™

Cooler Receipt Form J12000100

Client: WSI Service Request #: ~~J1105080~~

Project: JED SWDF

Cooler received on 11-11-11 and opened on 11-11-11 by SC

COURIER: CAS UPS FEDEX Client Other: _____ Airbill # _____

1	Were custody seals on outside of cooler?	Yes	No.		
	If yes, how many and where?	#: 1	on lid	other	
2	Were seals intact and signature and date correct?	Yes	No	N/A	
3	Were custody papers properly filled out?	Yes	No	N/A	
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	2.7	4.8	1.7	2.3
5	Thermometer ID	T71	T71	T71	T71
6	Temperature Blank Present?	Yes	No		
7	Were Ice or Ice Packs present	Ice	Ice Packs	No	
8	Did all bottles arrive in good condition (unbroken, etc....)?	Yes	No	N/A	
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap	
		Paper	Styrofoam	Other	N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	Yes	No	N/A	
11	Did all bottle labels and tags agree with custody papers?	Yes	No	N/A	
12	Were the correct bottles used for the tests indicated?	Yes	No	N/A	
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	N/A	
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2				
	Preservative additions noted below				
14	Were all samples received within analysis holding times?	Yes	No	N/A	
15	Were all VOA vials free of air bubbles? If present, note below	Yes	No	N/A	
16	Where did the bottles originate?	CAS	Client		

Sample ID	Reagent	Lot #	ml added	Initials Date/Time
All samples except L7	H2SO4	Gen651-6E	2.0	SC 11-11-11 1510
	HNO3	Met-12-7E	4.0	SC 11-11-11 1520
	ZnAc2 NaOH	Gen-585-87F	3.0	SC 11-11-11 1525
	NaOH		5.0	SC 11-11-11 1525

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

J1200100

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 1 OF 1

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J1200100
Waste Services of Florida, Inc.
JED SWDF

Waste Services of Florida, Inc.
JED SWDF

Project Name: JED SWDF
Project Number:
Project Manager: Joe Terry
Email Address: jterry@wsii.us
Company/Address: WSI
11500 43rd St. North
Clearwater, FL 33762
Phone #: 813-943-8633
FAX#:
Sampler's Signature: Joe Terry
Sampler's Printed Name: Joe Terry

ANALYSIS REQUESTED (Include Method Number a

PRESERVATIVE: See below | 0 | 3 | 2 | 4&5 | 4 | 0 | 0 | 0 | 0

NUMBER OF CONTAINERS

0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	8011	NH_3, COD	Metals	Sulfate	Cyanide	CO_3, NO_3, Alk, TDS, DO	8270	8081	8082	8151				REMARKS/ ALTERNATE DESCRIPTION
L-1		11-10-11	1235	Leachate	17	X	X	X	X	X	X	X	X	X	X	X				
L-2		↓	1125	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
L-3		↓	1020	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
L-4		↓	1325	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
L-5		↓	1415	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
L-7		11-10-11	1520	Leachate	17	X	X	X	X	X	X	X	X	X	X	X				
Trip Blank		11-1-11	0800	DI H_2O	2	X														

SPECIAL INSTRUCTIONS/COMMENTS

Cooler ID: 11~~3~~14 - JED-1-4

* Leachate sample vials for 8260 for L-1, L-2, L-3, L-4, L-5 are unpreserved. Sample vials for L-7 have HCl preservative

See QAPP ☐ 2.7 4.8 1.7 2.3

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 7.21 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Joe Terry	Signature: [illegible]	Signature: [illegible]	Signature: [illegible]	Signature	Signature
Printed Name: Joe Terry	Printed Name: Robert Nicholas	Printed Name: Robert Nicholas	Printed Name: Shawn Lightsey	Printed Name	Printed Name
Firm: WSI	Firm: CAS	Firm: CAS	Firm: CAS	Firm	Firm
Date/Time: 11-11-11 / 12:05	Date/Time: 11/11/11 12:05	Date/Time: 11/11/11 21:15	Date/Time: 11-11-11 1415	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

JSCOC-3/11

Craig Myers

J1200100
Waste Services of Florida, Inc.
JED SWDF

From: Joseph Terry [jterry@wasteservicesinc.com]
Sent: Friday, January 06, 2012 5:03 PM
To: Craig Myers
Subject: JED leachate alkalinity analysis

Hi Craig,

Please analyze the JED leachate samples (L-1 through L-5 and L-7; [L-6 was analyzed for alkalinity already]) for Total alkalinity as CaCO3.

Thank you,

Joe Terry
Environmental Manager

WSI
A Progressive Waste Solutions Company
Cell: (813) 943-8633
Fax: (727) 572-8102
11500 43rd Street North
Clearwater, Florida 33762
jterry@wsii.us

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