Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174
(386)672-5668

February 07, 2011

Ms. Jennifer Stirk
Volusia County Solid Waste Management
1990 Tomoka Farms Road
Port Orange, FL 32128

RE: Project: Tomoka Remediation
Pace Project No.: 3525789

Dear Ms. Stirk:
Enclosed are the analytical results for sample(s) received by the laboratory on February 03, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Jeff Baylor

jeff.baylor@pacelabs.com
Project Manager

Enclosures

cc: Ms. Lynne McDaniel, HDR Engineering, Inc.

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CERTIFICATIONS

Project: Tomoka Remediation
Pace Project No.: 3525789

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
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
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: LA090012
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL1264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pennsylvania Certification #: 68-547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
Virginia Certification #: 00432
Wyoming Certification: FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: Tomoka Remediation
Pace Project No.: 3525789

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3525789001	**EQ Blank**	Water	02/02/11 10:20	02/03/11 07:15
3525789002	**B-68**	Water	02/02/11 11:06	02/03/11 07:15
3525789003	**B-59-1**	Water	02/02/11 11:36	02/03/11 07:15
3525789004	**B-75**	Water	02/02/11 12:19	02/03/11 07:15
3525789005	**B38-2**	Water	02/02/11 13:10	02/03/11 07:15
3525789006	**B37-1**	Water	02/02/11 13:53	02/03/11 07:15
3525789007	**B-64**	Water	02/02/11 14:37	02/03/11 07:15
3525789008	**B-2**	Water	02/02/11 16:02	02/03/11 07:15
3525789009	**B-8**	Water	02/02/11 16:49	02/03/11 07:15

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SAMPLE ANALYTE COUNT

Project: Tomoka Remediation
Pace Project No.: 3525789

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3525789001	**EQ Blank**	EPA 350.1	AMD	1	PASI-O
3525789002	**B-68**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789003	**B-59-1**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789004	**B-75**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789005	**B38-2**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789006	**B37-1**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789007	**B-64**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789008	**B-2**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O
3525789009	**B-8**		JSB	6	PASI-O
		EPA 350.1	AMD	1	PASI-O

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PROJECT NARRATIVE

Project: Tomoka Remediation
Pace Project No.: 3525789

Method:
Description: Field Data
Client: Volusia County Solid Waste Management
Date: February 07, 2011

General Information:
8 samples were analyzed for . All samples were received in acceptable condition with any exceptions noted below.

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: Tomoka Remediation
Pace Project No.: 3525789

Method: **EPA 350.1**
Description: 350.1 Ammonia
Client: Volusia County Solid Waste Management
Date: February 07, 2011

General Information:
9 samples were analyzed for EPA 350.1. All samples were received in acceptable condition with any exceptions noted below.

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

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

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

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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

QC Batch: WETA/8518

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 3525789006

J(M1): Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 167963)
  - Nitrogen, Ammonia

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: EQ Blank **Lab ID: 3525789001** Collected: 02/02/11 10:20 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.020U**	mg/L	0.050	0.020	1		02/07/11 11:37	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-68 **Lab ID: 3525789002** Collected: 02/02/11 11:06 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.87**	Std. Units			1		02/03/11 11:21		
Field Temperature	**23.94**	deg C			1		02/03/11 11:21		
Field Specific Conductance	**693**	umhos/cm			1		02/03/11 11:21		
Oxygen, Dissolved	**0.24**	mg/L			1		02/03/11 11:21	7782-44-7	
REDOX	**5.9**	mV			1		02/03/11 11:21		
Turbidity	**1.4**	NTU			1		02/03/11 11:21		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**1.1**	mg/L	0.050	0.020	1		02/07/11 11:39	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-59-1 **Lab ID: 3525789003** Collected: 02/02/11 11:36 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.69**	Std. Units			1		02/03/11 11:22		
Field Temperature	**23.71**	deg C			1		02/03/11 11:22		
Field Specific Conductance	**666**	umhos/cm			1		02/03/11 11:22		
Oxygen, Dissolved	**0.12**	mg/L			1		02/03/11 11:22	7782-44-7	
REDOX	**-80.9**	mV			1		02/03/11 11:22		
Turbidity	**1.0**	NTU			1		02/03/11 11:22		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.12**	mg/L	0.050	0.020	1		02/07/11 11:40	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-75 **Lab ID: 3525789004** Collected: 02/02/11 12:19 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.45**	Std. Units			1		02/03/11 11:22		
Field Temperature	**22.86**	deg C			1		02/03/11 11:22		
Field Specific Conductance	**1375**	umhos/cm			1		02/03/11 11:22		
Oxygen, Dissolved	**0.22**	mg/L			1		02/03/11 11:22	7782-44-7	
REDOX	**-77.3**	mV			1		02/03/11 11:22		
Turbidity	**9.5**	NTU			1		02/03/11 11:22		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.93**	mg/L	0.050	0.020	1		02/07/11 11:42	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B38-2 **Lab ID: 3525789005** Collected: 02/02/11 13:10 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.95**	Std. Units			1		02/03/11 11:23		
Field Temperature	**17.66**	deg C			1		02/03/11 11:23		
Field Specific Conductance	**434**	umhos/cm			1		02/03/11 11:23		
Oxygen, Dissolved	**0.16**	mg/L			1		02/03/11 11:23	7782-44-7	
REDOX	**142.6**	mV			1		02/03/11 11:23		
Turbidity	**2.8**	NTU			1		02/03/11 11:23		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.28**	mg/L	0.050	0.020	1		02/07/11 11:43	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B37-1 **Lab ID: 3525789006** Collected: 02/02/11 13:53 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.62**	Std. Units			1		02/03/11 11:23		
Field Temperature	**22.30**	deg C			1		02/03/11 11:23		
Field Specific Conductance	**2127**	umhos/cm			1		02/03/11 11:23		
Oxygen, Dissolved	**0.18**	mg/L			1		02/03/11 11:23	7782-44-7	
REDOX	**-88.5**	mV			1		02/03/11 11:23		
Turbidity	**16**	NTU			1		02/03/11 11:23		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.86**	mg/L	0.050	0.020	1		02/07/11 11:47	7664-41-7	J(M1)

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-64 **Lab ID: 3525789007** Collected: 02/02/11 14:37 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.71**	Std. Units			1		02/03/11 11:24		
Field Temperature	**18.62**	deg C			1		02/03/11 11:24		
Field Specific Conductance	**814**	umhos/cm			1		02/03/11 11:24		
Oxygen, Dissolved	**0.25**	mg/L			1		02/03/11 11:24	7782-44-7	
REDOX	**-118.7**	mV			1		02/03/11 11:24		
Turbidity	**6.4**	NTU			1		02/03/11 11:24		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.98**	mg/L	0.050	0.020	1		02/07/11 11:55	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-2 **Lab ID: 3525789008** Collected: 02/02/11 16:02 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**5.51**	Std. Units			1		02/03/11 11:24		
Field Temperature	**22.11**	deg C			1		02/03/11 11:24		
Field Specific Conductance	**1050**	umhos/cm			1		02/03/11 11:24		
Oxygen, Dissolved	**0.26**	mg/L			1		02/03/11 11:24	7782-44-7	
REDOX	**31.2**	mV			1		02/03/11 11:24		
Turbidity	**8.9**	NTU			1		02/03/11 11:24		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**3.1**	mg/L	0.050	0.020	1		02/07/11 11:56	7664-41-7	

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ANALYTICAL RESULTS

Project: Tomoka Remediation
Pace Project No.: 3525789

Sample: B-8 **Lab ID: 3525789009** Collected: 02/02/11 16:49 Received: 02/03/11 07:15 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**6.55**	Std. Units			1		02/03/11 11:25		
Field Temperature	**24.14**	deg C			1		02/03/11 11:25		
Field Specific Conductance	**602**	umhos/cm			1		02/03/11 11:25		
Oxygen, Dissolved	**0.26**	mg/L			1		02/03/11 11:25	7782-44-7	
REDOX	**-54.4**	mV			1		02/03/11 11:25		
Turbidity	**0.50**	NTU			1		02/03/11 11:25		
350.1 Ammonia	Analytical Method: EPA 350.1								
Nitrogen, Ammonia	**0.20**	mg/L	0.050	0.020	1		02/07/11 11:58	7664-41-7	

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QUALITY CONTROL DATA

Project: Tomoka Remediation
Pace Project No.: 3525789

QC Batch: WETA/8517 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 3525789001, 3525789002, 3525789003, 3525789004, 3525789005

METHOD BLANK: 167956 Matrix: Water
Associated Lab Samples: 3525789001, 3525789002, 3525789003, 3525789004, 3525789005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	02/07/11 11:04	

LABORATORY CONTROL SAMPLE: 167957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 167959

Parameter	Units	3525729001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.036 I	1	1.0	99	90-110	

SAMPLE DUPLICATE: 167958

Parameter	Units	3525729001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.036 I	0.045 I		20	

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QUALITY CONTROL DATA

Project: Tomoka Remediation
Pace Project No.: 3525789

QC Batch: WETA/8518 Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia
Associated Lab Samples: 3525789006, 3525789007, 3525789008, 3525789009

METHOD BLANK: 167960 Matrix: Water
Associated Lab Samples: 3525789006, 3525789007, 3525789008, 3525789009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020U	0.050	02/07/11 11:45	

LABORATORY CONTROL SAMPLE: 167961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 167963

Parameter	Units	3525789006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.86	1	1.6	76	90-110	J(M1)

SAMPLE DUPLICATE: 167962

Parameter	Units	3525789006 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.86	0.87	2	20	

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QUALIFIERS

Project: Tomoka Remediation
Pace Project No.: 3525789

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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 NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

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.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Tomoka Remediation
Pace Project No.: 3525789

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3525789002	**B-68**		FLD/		
3525789003	**B-59-1**		FLD/		
3525789004	**B-75**		FLD/		
3525789005	**B38-2**		FLD/		
3525789006	**B37-1**		FLD/		
3525789007	**B-64**		FLD/		
3525789008	**B-2**		FLD/		
3525789009	**B-8**		FLD/		
3525789001	**EQ Blank**	EPA 350.1	WETA/8517		
3525789002	**B-68**	EPA 350.1	WETA/8517		
3525789003	**B-59-1**	EPA 350.1	WETA/8517		
3525789004	**B-75**	EPA 350.1	WETA/8517		
3525789005	**B38-2**	EPA 350.1	WETA/8517		
3525789006	**B37-1**	EPA 350.1	WETA/8518		
3525789007	**B-64**	EPA 350.1	WETA/8518		
3525789008	**B-2**	EPA 350.1	WETA/8518		
3525789009	**B-8**	EPA 350.1	WETA/8518		

3525789

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1421505

Section A
Required Client Information:
Company: Volusia County
Address: 1990 Tomoka Farms Rd.
Daytona Bch, FL 32124
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B
Required Project Information:
Report To: Jennifer Stirk
Copy To:
Purchase Order No.:
Project Name: Tomoka Remediation
Project Number:

Section C
Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: FL

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	↓Analysis Test↓ Y/N	NH3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	EQ	WT	G			2/2/11	1020		1		1								1		
2	B-68	↓	↓			↓	1106		↓		↓								↓		
3	~~B-59-1~~ B59-1	↓	↓			↓	1136		↓		↓								↓		
4	B-75	↓	↓			↓	1219		↓		↓								↓		
5	B38-2	↓	↓			↓	1310		↓		↓								↓		
6	B37-1	↓	↓			↓	1353		↓		↓								↓		
7	B-64	↓	↓			↓	1437		↓		↓								↓		
8	B-2	↓	↓			↓	1602		↓		↓								↓		
9	B-8	↓	↓			↓	1649		↓		↓								↓		
10																					
11																					
12																					

SJS 2/2/11 (margin note beside item 3)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Stacey Smith (signature)	2/2/11	1738	R. Angle (signature)	2/4/11	7:15	0.0	Y		
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE T39
PRINT Name of SAMPLER: Stacey Smith
SIGNATURE of SAMPLER: Stacey Smith (signature) DATE Signed (MM/DD/YY): 2/2/11

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: EQ	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water:	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(-) X 0.16 Gallons/Foot = Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet):	Final Pump or Tubing Depth in Well:	Purging Initiated At:	Purging Ended At:	Total Volume Purged (Gallons):

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1020												

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacey Smith	1020	

Pump or Tubing Depth in Well (Feet):	Sample Pump Flow Rate (mL per minute):	Tubing Material Code:	Field Decontamination:	Field-Filtered:	Duplicate:
	100-200ml	PE	[Yes] [No]	[Yes] [No] Filter Size: µm	[Yes] [No]

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[Y] Cloudy
Temperature: 60
Rain: [Yes] [No]
Wind Speed: 10-15
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth:_____
Type: [ ] Lake [ ] Stream [ ] River [ ] Other _____

[ ] Waste Water: Start Time _____ Finish Time _____
Sampling Point:_____ Volume:_____
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

[ ] Drum Waste — Type: — Layers [Yes] [No] — [ ] Composite [ ] Grab

[ ] Other: — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

Field Notes:

On Ice @ Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL
Well #: B-68	Sample ID:
	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 8.28	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(35.75 - 8.28) X 0.16 Gallons/Foot = 4.40 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 13	Final Pump or Tubing Depth in Well: 14	Purging Initiated At: 1050	Purging Ended At: 1105	Total Volume Purged (Gallons): 7.50

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/l or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1059	4.50	4.50	0.50	12.40	5.87	23.94	691	0.25	1.3	none	none	6.3
1102	1.50	6.00	↓	12.31	5.87	23.97	688	0.21	0.95	↓	↓	6.1
1105	1.50	7.50	↓	12.23	5.87	23.94	693	0.24	1.4	↓	↓	5.9

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacy Smith	1106	1107

Pump or Tubing Depth in Well (Feet): 14	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: [Yes] [No]	Field-Filtered: [Yes] [No] Filter Size: ___ µm	Duplicate: [Yes] [No]

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[✓] Cloudy
Temperature: 60
Rain: [Yes] [No]
Wind Speed: 10-15
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ____
Type: [ ] Lake [ ] Stream [ ] River [ ] Other ____

[ ] Waste Water: Start Time ____ Finish Time ____
Sampling Point: ____ Volume: ____
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

[ ] Drum Waste — Type: — Layers [Yes] [No] — [ ] Composite [ ] Grab

[ ] Other: — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1108 Bottles Preserved <2pH

See Work Order/Bottle Order

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Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B59-1	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2627

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 8.97	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(35.10 - 8.97) X 0.16 Gallons/Foot = 4.18 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 13	Final Pump or Tubing Depth in Well: 13	Purging Initiated At: 1120	Purging Ended At: 1135	Total Volume Purged (Gallons): 7.5

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1129	4.50	4.50	0.50	11.35	6.69	23.68	667	0.11	1.0	none	none	-79.8
1132	1.50	6.00	↓	11.20	6.69	23.62	667	0.15	0.85	↓	↓	-80.1
1135	1.50	7.50	↓	11.25	6.69	23.71	666	0.12	1.0	↓	↓	-80.9

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacey Smith	1134	1137

Pump or Tubing Depth in Well (Feet): 13	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: [Yes] [No]	Field-Filtered: [Yes] [No] Filter Size: ___ µm	Duplicate: [Yes] [No]

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[x] Cloudy
Temperature: 60
Rain: [Yes] [No]
Wind Speed: 10-15
Wind Direction: N

[ ] Surface Water Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ___
Type: [ ] Lake [ ] Stream [ ] River [ ] Other ___

[ ] Waste Water: Start Time ___ Finish Time ___
Sampling Point: ___ Volume: ___
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment Sampling Point: Sample Depth: [ ] Composite [ ] Grab

[ ] Drum Waste Type: Layers [Yes] [No] [ ] Composite [ ] Grab

[ ] Other: Sampling Point: Sample Depth: [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1136 Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B-75	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 11.21	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(20.80 - 11.21) X 0.16 Gallons/Foot = 1.53 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 15	Final Pump or Tubing Depth in Well: 15	Purging Initiated At: 1207	Purging Ended At: 1218	Total Volume Purged (Gallons): 2.75

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
~~1209~~	1.75	1.75	0.25	11.95	6.45	~~1374~~ 22.91	1374	0.21	12	yellow	none	-72.4
~~1214~~ 1216	0.50	2.25	↓	↓	6.45	22.88	1375	0.22	11	↓	↓	-74.1
1218 →	0.50	2.75	↓	↓	6.45	22.86	1375	0.22	9.5	↓	↓	-77.3

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacy Smith	1219	1220

Pump or Tubing Depth in Well (Feet): 15	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: (Yes) [No]	Field-Filtered: [Yes] (No) Filter Size: ____ µm	Duplicate: [Yes] (No)

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[x] Cloudy
Temperature: 60
Rain: [Yes] [No]
Wind Speed: 10-15
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ____
Type: [ ] Lake [ ] Stream [ ] River [ ] Other ____

[ ] Waste Water: Start Time ____ Finish Time ____
Sampling Point: ____ Volume: ____
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment Sampling Point: Sample Depth: [ ] Composite [ ] Grab

[ ] Drum Waste Type: Layers [Yes] [No] [ ] Composite [ ] Grab

[ ] Other: Sampling Point: Sample Depth: [ ] Composite [ ] Grab

Field Notes:

On Ice @1221 Bottles Preserved <2pH

See Work Order/Bottle Order

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Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B38-2	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 4.44	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(17.47 - 4.44) X 0.16 Gallons/Foot = 2.08 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 9	Final Pump or Tubing Depth in Well: 9	Purging Initiated At: 1254	Purging Ended At: 1309	Total Volume Purged (Gallons): 3.75

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or (µS/cm))	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1303	2.25	2.25	0.25	6.89	5.85	17.78	437	0.23	3.7	yellow	none	156.3
1306	0.75	3.00	↓	7.01	5.97	17.66	435	0.19	2.3	↓	↓	148.6
1309	0.75	3.75	↓	7.11	5.95	17.66	434	0.16	2.8	↓	↓	142.6

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacey Smith	1310	1311

Pump or Tubing Depth in Well (Feet): 9	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: [Yes] [No]	Field-Filtered: [Yes] [No] Filter Size: ___ µm	Duplicate: [Yes] [No]

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[X] Cloudy
Temperature: 60
Rain: [Yes] [No]
Wind Speed: 10-15
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ___ Type: [ ] Lake [ ] Stream [ ] River [ ] Other ___

[ ] Waste Water: Start Time ___ Finish Time ___ Sampling Point: ___ Volume: ___ [ ] Composite [ ] Grab mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

[ ] Drum Waste — Type: — Layers [Yes] [No] — [ ] Composite [ ] Grab

[ ] Other: — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1312 Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B37-1	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 2.78	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(37.68 - 2.78) X 0.16 Gallons/Foot = 5.66 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 8	Final Pump or Tubing Depth in Well: 8	Purging Initiated At: 1334	Purging Ended At: 1352	Total Volume Purged (Gallons): 9.0

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1346	6.00	6.00	0.50	4.30	6.66	22.17	2061	0.19	19	yellow	none	-87.3
1349	1.50	7.50	↓	↓	6.54	22.25	2093	0.18	18	↓	↓	-88.3
1352	1.50	9.00	↓	↓	6.62	22.30	2127	0.18	16	↓	↓	-88.5

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacey Smith	1353	1354

Pump or Tubing Depth in Well (Feet): 8	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: [Yes] [No]	Field-Filtered: [Yes] [No] Filter Size: ___ µm	Duplicate: [Yes] [No]

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[X] Cloudy
Temperature: 65
Rain: [Yes] [No]
Wind Speed: 5-10
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ____ Type: [ ] Lake [ ] Stream [ ] River [ ] Other ____

[ ] Waste Water: Start Time ____ Finish Time ____ Sampling Point: ____ Volume: ____ [ ] Composite [ ] Grab mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment Sampling Point: Sample Depth: [ ] Composite [ ] Grab

[ ] Drum Waste Type: Layers [Yes] [No] [ ] Composite [ ] Grab

[ ] Other: Sampling Point: Sample Depth: [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1355 Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B-64	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 2.13	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(17.50 - 2.13) X 0.16 Gallons/Foot = 2.45 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 8	Final Pump or Tubing Depth in Well: 8	Purging Initiated At: 1420	Purging Ended At: 1436	Total Volume Purged (Gallons): 4.0

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or (µS/cm))	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1430	2.50	2.50	0.25	4.83	6.70	18.52	812	0.26	6.7	yellow	none	-118.0
1433	0.75	3.25	↓	↓	6.67	18.64	813	0.23	6.0	↓	↓	-118.6
1436	0.75	4.00	↓	↓	6.71	18.62	814	0.25	6.4	↓	↓	-118.7

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At:	Sampling Ended At:
Stacey Smith / Pace	Stacey Smith	1437	1438

Pump or Tubing Depth in Well (Feet): 8	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: (Yes) [No]	Field-Filtered: [Yes] (No) Filter Size: µm	Duplicate: [Yes] (No)

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[x] Sunny
[ ] Partly Cloudy
[ ] Cloudy
Temperature: 65
Rain: [Yes] [No]
Wind Speed: 5-10
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth:_____
Type: [ ] Lake [ ] Stream [ ] River [ ] Other _____

[ ] Waste Water: Start Time _____ Finish Time _____
Sampling Point:_____ Volume:_____
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

[ ] Drum Waste — Type: — Layers [Yes] [No] — [ ] Composite [ ] Grab

[ ] Other: — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1439 Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B-2	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 8.17	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(27.21 - 8.17) X 0.16 Gallons/Foot = 3.05 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 13	Final Pump or Tubing Depth in Well: 13	Purging Initiated At: 1539	Purging Ended At: 1601	Total Volume Purged (Gallons): 5.5

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1552	3.25	3.25	0.25	11.02	5.51	21.62	1051	0.42	5.9	none	Sulfur	39.1
1555	0.75	4.00	↓	11.04	5.53	21.97	1056	0.29	6.7	↓	↓	34.5
1558	0.75	4.75	↓	11.06	5.52	22.05	1048	0.26	9.1	↓	↓	33.8
1601	0.75	5.50	↓	11.05	5.51	22.11	1050	0.26	8.9	↓	↓	31.2

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print)	Sampler(s) Signatures	Sampling Initiated At	Sampling Ended At:
Stacey Smith / Pace	Stacy Smith	1602	1603

Pump or Tubing Depth in Well (Feet): 13	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: (Yes) [No]	Field-Filtered: [Yes] (No) Filter Size: ___µm	Duplicate: [Yes] (No)

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[✓] Cloudy
Temperature: 67
Rain: [Yes] [No]
Wind Speed: 5-10
Wind Direction: N

[ ] Surface Water — Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other
Total Depth: ____
Type: [ ] Lake [ ] Stream [ ] River [ ] Other ____

[ ] Waste Water: Start Time ____ Finish Time ____
Sampling Point: ____ Volume: ____
[ ] Composite [ ] Grab
mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

[ ] Drum Waste — Type: — Layers [Yes] [No] — [ ] Composite [ ] Grab

[ ] Other: — Sampling Point: — Sample Depth: — [ ] Composite [ ] Grab

Field Notes:

On Ice @ 1604 Bottles Preserved <2pH

See Work Order/Bottle Order

Pace Analytical Field Sampling Log

Site Name: Tomokal Landfill Remediation Project	Site Location: Volusia County, FL	
Well #: B-8	Sample ID:	Date: 2/2/11

PURGING DATA

YSI: 02606/2697

Well Diameter: 2"	Tubing Diameter: 3/8"	Well Screen Interval Depth: Feet to	Static Depth to Water: 15.50	Sampling Device: PP

Well Volume Purge: (Total Well Depth – Static Depth to Water) X Well Capacity= Well Volume

(47.88 - 15.50) X 0.16 Gallons/Foot = 5.18 Gallons

Equipment Volume Purge: Pump Volume + (Tubing Capacity X Tubing Length) + Flow Cell Volume= Equipment Volume

+(X)+ = Gallons

Initial Pump or Tubing Depth in Well (Feet): 17	Final Pump or Tubing Depth in Well: 17	Purging Initiated At: 1615	Purging Ended At: 1648	Total Volume Purged (Gallons): 8.25

Time	Volume Purged (Gal)	CUMUL Volume Purged (Gal)	Purge Rate (gpm)	Depth to Water (Feet)	pH (Standard Units)	Temp. (°C)	Conductivity (µmhos/cm or µS/cm)	Dissolved Oxygen (circle mg/L or % saturation)	Turbidity (NTUs)	Color (Describe)	Odor (Describe)	ORP
1636	5.25	5.25	0.25	15.70	6.50	24.18	579	0.34	0.30	none	none	-41.1
1642	1.50	6.75	↓	↓	6.53	24.16	591	0.31	0.20	↓	↓	-48.9
1648	1.50	8.25	↓	↓	6.55	24.14	602	0.26	0.50	↓	↓	-57.4

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
Tubing Inside DIA. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

Sampled By (Print): Stacey Smith /Pace	Sampler(s) Signatures: [signature]	Sampling Initiated At: 1649	Sampling Ended At: 1650

Pump or Tubing Depth in Well (Feet): 17	Sample Pump Flow Rate (mL per minute): 100-200ml	Tubing Material Code: PE	Field Decontamination: (Yes) [No]	Field-Filtered: [Yes] (No) Filter Size: ___ µm	Duplicate: [Yes] (No)

Sample ID Code	# Containers	Material Code	Volume	Preservative Used	Total Volume Added in Field (mL)	Final pH	Intended Analysis and/or Method	Sampling Equipment Code
	1	PE	250 ml				Anions	PP

Weather Conditions
[ ] Sunny
[ ] Partly Cloudy
[X] Cloudy
Temperature: 70
Rain: [Yes] [No] (No circled)
Wind Speed: 5-10
Wind Direction: N

[ ] **Surface Water** Total Depth: ____ Type: [ ] Lake [ ] Stream [ ] River [ ] Other ______
Taken From: [ ] Shore [ ] Surface [ ] Boat [ ] Mid-Depth [ ] Bridge [ ] Bottom [ ] Wading [ ] Other

[ ] **Waste Water:** Start Time ______ Finish Time ______ Sampling Point: ______ Volume: ______ [ ] Composite [ ] Grab mL per: [ ] Hour [ ] ½ Hour [ ]

[ ] Soils/Sediment Sampling Point: Sample Depth: [ ] Composite [ ] Grab

[ ] Drum Waste Type: Layers [Yes] [No] [ ] Composite [ ] Grab

[ ] Other: Sampling Point: Sample Depth: [ ] Composite [ ] Grab

Field Notes: decided to try to purge well w/ less tubing (22' vs. 30'). This worked but could only purge ~~slow~~ so slow slowly.

On Ice @ 1651 Bottles Preserved <2pH

V:\Field\Field Sheets

See Work Order/Bottle Order

Sample Condition Upon Receipt Form (SCUR)

Table Number: _____

Pace Analytical

Client Name: Volusia County Project # 3525789

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

Tracking # _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

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

Thermometer Used 39 **Type of Ice:** (Wet) Blue None

Cooler Temperature 0-0 **(Actual)** (Temp should be above freezing to 6°C)

Date and Initials of person examining contents: 2-3-11 PL

Secondary Review Initials: _____

Receipt of samples satisfactory: ☐ Yes ☐ No **Rush TAT requested on COC:** ☐

If yes, then all conditions below were met:	If no, then mark box & describe issue (use comments area if necessary):
Chain of Custody Present	☐
Chain of Custody Filled Out	☐
Relinquished Signature & Sampler Name COC	☐
Samples Arrived within Hold Time	☐
Sufficient Volume	☐
Correct Containers Used	☐
Containers Intact	☐
Sample Labels match COC (sample IDs & date/time of collection)	☐ No Labels: ☐ No Time/Date on Labels: ☐
All containers needing preservation are found to be in compliance with EPA recommendation.	☐
No Headspace in VOA Vials (>6mm):	☐

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution (use back for additional comments): _____

Project Manager Review: _____ **Date:** 2/24

Finished Product Information Only

F.P. Sample ID: _____

Production Code: _____

Date/Time Opened: _____

Number of Unopened Bottles Remaining: _____

Extra Sample in Shed: Yes No

Size & Qty of Bottles Received

_____ x 5 Gal
_____ x 2.5 Gal
_____ x 1 Gal
_____ x 1 Liter
_____ x 500 mL
_____ x 250 mL
_____ x Other: _____