Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 13, 2019

Bell Buckle WWTP

Sample Delivery Group:	L1167049
Samples Received:	12/04/2019
Project Number:	
Description:	
Site:	TN0020591
Report To:	Eddy Lamb 8 Railroad Square Bell Buckle, TN 37020

Entire Report Reviewed By:

Justin Carr
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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1 BIG L1167049-01 Waste

Collected by: Eddy Lamb
Collected date/time: 12/04/19 08:00
Received date/time: 12/04/19 10:12

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1391512	1	12/05/19 10:03	12/05/19 10:03	IDW	Mt. Juliet, TN
Preparation by Method 1311	WG1393502	1	12/09/19 11:55	12/09/19 11:55	BAA	Mt. Juliet, TN
Mercury by Method 7470A	WG1393864	1	12/10/19 09:19	12/10/19 20:00	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1393870	1	12/10/19 09:30	12/10/19 11:28	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1393478	1	12/10/19 00:31	12/10/19 00:31	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1394207	1	12/10/19 15:45	12/11/19 14:08	LEL	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1394202	1	12/10/19 17:08	12/11/19 11:31	HMH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1394851	1	12/11/19 17:12	12/12/19 00:54	AO	Mt. Juliet, TN

2 SMALL L1167049-02 Solid

Collected by: Eddy Lamb
Collected date/time: 12/04/19 08:00
Received date/time: 12/04/19 10:12

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1391821	1	12/06/19 17:52	12/06/19 18:14	MMF	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082	WG1391746	14.2	12/05/19 16:05	12/06/19 15:04	RP	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Justin Carr
Project Manager

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/9/2019 11:55:54 AM	WG1393502
TCLP ZHE Extraction	-		12/5/2019 10:03:38 AM	WG1391512
Fluid	1		12/9/2019 11:55:54 AM	WG1393502
Initial pH	6.71		12/9/2019 11:55:54 AM	WG1393502
Final pH	4.89		12/9/2019 11:55:54 AM	WG1393502

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	ND		0.0100	0.20	1	12/10/2019 20:00	WG1393864

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Arsenic	ND		0.100	5	1	12/10/2019 11:28	WG1393870
Barium	0.130		0.100	100	1	12/10/2019 11:28	WG1393870
Cadmium	ND		0.100	1	1	12/10/2019 11:28	WG1393870
Chromium	ND		0.100	5	1	12/10/2019 11:28	WG1393870
Lead	ND		0.100	5	1	12/10/2019 11:28	WG1393870
Selenium	ND		0.100	1	1	12/10/2019 11:28	WG1393870
Silver	ND		0.100	5	1	12/10/2019 11:28	WG1393870

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	ND		0.0500	0.50	1	12/10/2019 00:31	WG1393478
Carbon tetrachloride	ND		0.0500	0.50	1	12/10/2019 00:31	WG1393478
Chlorobenzene	ND		0.0500	100	1	12/10/2019 00:31	WG1393478
Chloroform	ND		0.250	6	1	12/10/2019 00:31	WG1393478
1,2-Dichloroethane	ND		0.0500	0.50	1	12/10/2019 00:31	WG1393478
1,1-Dichloroethene	ND		0.0500	0.70	1	12/10/2019 00:31	WG1393478
2-Butanone (MEK)	ND		0.500	200	1	12/10/2019 00:31	WG1393478
Tetrachloroethene	ND		0.0500	0.70	1	12/10/2019 00:31	WG1393478
Trichloroethene	ND		0.0500	0.50	1	12/10/2019 00:31	WG1393478
Vinyl chloride	ND		0.0500	0.20	1	12/10/2019 00:31	WG1393478
(S) Toluene-d8	*98.8*		*80.0-120*			*12/10/2019 00:31*	WG1393478
(S) 4-Bromofluorobenzene	*96.9*		*77.0-126*			*12/10/2019 00:31*	WG1393478
(S) 1,2-Dichloroethane-d4	*116*		*70.0-130*			*12/10/2019 00:31*	WG1393478

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2,4,5-TP (Silvex)	ND		0.00200	1	1	12/11/2019 14:08	WG1394207
2,4-D	ND		0.00200	10	1	12/11/2019 14:08	WG1394207
(S) 2,4-Dichlorophenyl Acetic Acid	*65.0*		*14.0-158*			*12/11/2019 14:08*	WG1394207

Pesticides (GC) by Method 8081B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chlordane	ND		0.00500	0.03	1	12/11/2019 11:31	WG1394202
Endrin	ND		0.00500	0.02	1	12/11/2019 11:31	WG1394202
Heptachlor	ND		0.00500	0.0080	1	12/11/2019 11:31	WG1394202
Lindane	ND		0.00500	0.40	1	12/11/2019 11:31	WG1394202

Pesticides (GC) by Method 8081B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Methoxychlor	ND		0.00500	10	1	12/11/2019 11:31	WG1394202
Toxaphene	ND		0.0100	0.50	1	12/11/2019 11:31	WG1394202
(S) Decachlorobiphenyl	*91.5*		*10.0-128*			*12/11/2019 11:31*	WG1394202
(S) Tetrachloro-m-xylene	*74.6*		*10.0-127*			*12/11/2019 11:31*	WG1394202

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
1,4-Dichlorobenzene	ND		0.100	7.50	1	12/12/2019 00:54	WG1394851
2,4-Dinitrotoluene	ND		0.100	0.13	1	12/12/2019 00:54	WG1394851
Hexachlorobenzene	ND		0.100	0.13	1	12/12/2019 00:54	WG1394851
Hexachloro-1,3-butadiene	ND		0.100	0.50	1	12/12/2019 00:54	WG1394851
Hexachloroethane	ND		0.100	3	1	12/12/2019 00:54	WG1394851
Nitrobenzene	ND		0.100	2	1	12/12/2019 00:54	WG1394851
Pyridine	ND	J3 J6	0.100	5	1	12/12/2019 00:54	WG1394851
3&4-Methyl Phenol	ND		0.100	400	1	12/12/2019 00:54	WG1394851
2-Methylphenol	ND		0.100	200	1	12/12/2019 00:54	WG1394851
Pentachlorophenol	ND		0.100	100	1	12/12/2019 00:54	WG1394851
2,4,5-Trichlorophenol	ND		0.100	400	1	12/12/2019 00:54	WG1394851
2,4,6-Trichlorophenol	ND		0.100	2	1	12/12/2019 00:54	WG1394851
(S) 2-Fluorophenol	*42.0*		*10.0-120*			*12/12/2019 00:54*	WG1394851
(S) Phenol-d5	*28.5*		*10.0-120*			*12/12/2019 00:54*	WG1394851
(S) Nitrobenzene-d5	*53.8*		*10.0-127*			*12/12/2019 00:54*	WG1394851
(S) 2-Fluorobiphenyl	*64.6*		*10.0-130*			*12/12/2019 00:54*	WG1394851
(S) 2,4,6-Tribromophenol	*72.5*		*10.0-155*			*12/12/2019 00:54*	WG1394851
(S) p-Terphenyl-d14	*69.3*		*10.0-128*			*12/12/2019 00:54*	WG1394851

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	1.88		1	12/06/2019 18:14	WG1391821

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
PCB 1016	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1221	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1232	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1242	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1248	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1254	ND		0.241	14.2	12/06/2019 15:04	WG1391746
PCB 1260	ND		0.241	14.2	12/06/2019 15:04	WG1391746
(S) Decachlorobiphenyl	*61.4*		*10.0-135*		*12/06/2019 15:04*	WG1391746
(S) Tetrachloro-m-xylene	*53.0*		*10.0-139*		*12/06/2019 15:04*	WG1391746

Sample Narrative:

L1167049-02 WG1391746: Dilution due to matrix impact during extraction procedure

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

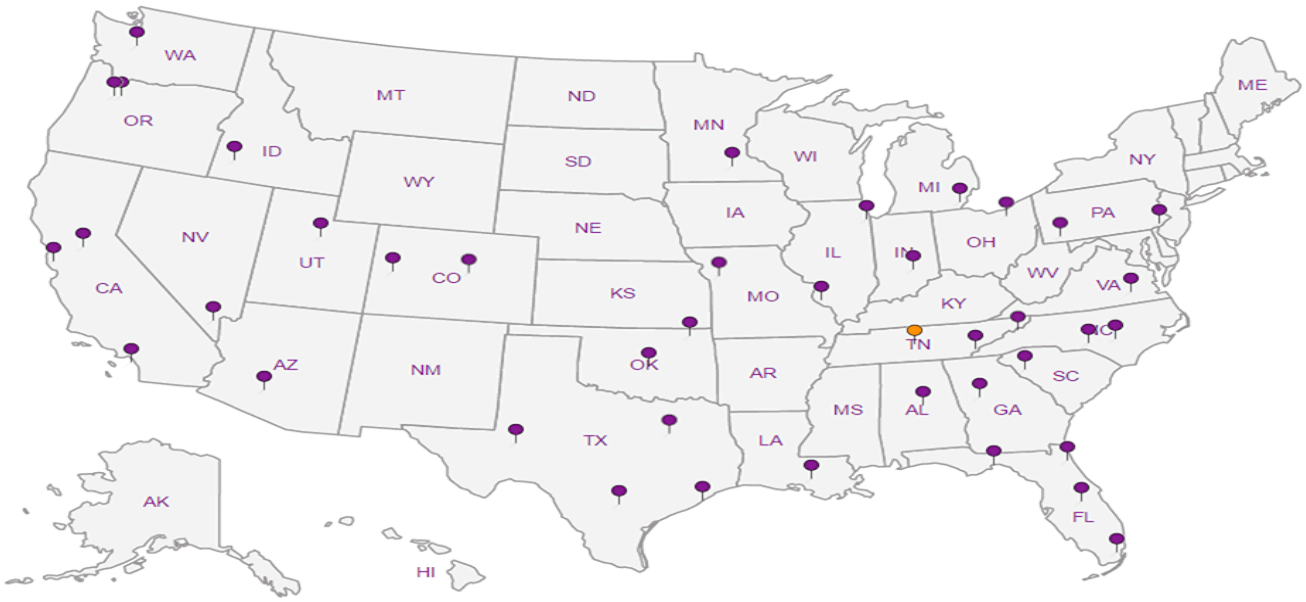
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Bell Buckle WWTP

8 Railroad Square
Bell Buckle, TN 37020

Billing Information:
Eddy Lamb
PO Box 276
Bell Buckle, TN 37020

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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Phone: 800-767-5859
Fax: 615-758-5859

Report to:
Eddy Lamb

Email To: **eddy_lamb@townofbellbuckle.com**

Project Description:

City/State Collected:

Please Circle: PT MT CT ET

Phone: **931-389-9513**
Fax: **931-389-6169**

Client Project #

Lab Project # Sludge Permit

SDG # 4167049
F037

Collected by (print): Eddy LAMB

Site/Facility ID # TN0020591

P.O. #

Acctnum: **BELLB02**
Template: **T156519**
Prelogin: **P731885**
PM: **807 - Justin Carr**
PB: 9-25-19 MW
Shipped Via: **FedEX Ground**

Collected by (signature): E Lamb

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8082 4ozClr-NoPres	TCLP 1L-Clr-NoPres	TSSLUDGE 4ozClr-NoPres							Remarks	Sample # (lab only)
1 Big		SS		12/4/19	800	1		X									-01
2 Small		SS		12/4/19	800	2	X		X								02

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_________

Remarks:

pH _______ Temp _______
Flow _______ Other _______

Samples returned via:
__ UPS __ FedEx __ Courier __ CT

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP _Y _N
COC Signed/Accurate: ✓Y _N
Bottles arrive intact: ✓Y _N
Correct bottles used: ✓Y _N
Sufficient volume sent: ✓Y _N
If Applicable
VOA Zero Headspace: _Y _N
Preservation Correct/Checked: _Y _N
RAD Screen <0.5 mR/hr: ✓Y _N
[illegible]

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
E Lamb	12/4	10:12		Trip Blank Received: Yes / (No) HCL MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: AS °C 0.2+2=0.4	Bottles Received: 3
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [illegible]	Date: 12-4-19	Time: 1012

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

[illegible] 12/4/19 1012