DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102
(615) 532-0625

NOTICE OF INTENT (NOI) for Land Application of Non-Exceptional Quality Biosolids

Generator Name: Town of Baileyton	Current NPDES No: TN0063932	Existing Tracking No: TNB063932

Owner or Operator: (the person or legal entity which controls the site's operation)

1	Name of Official Contact Person: (individual responsible for a site) Tommy Casteel	Title or Position: Mayor		
	Mailing Address: 6530 Horton Hwy.	City: Bailyton	State: TN	Zip: 37745
	Phone: ( )423-234-6911	E-mail: N/A		
2	Name of Local Contact Person: (if appropriate, write "same as #1") Danny Neely	Title or Position: Wastewater Operator		
	Site Address: (this may or may not be the same as street address) 90 Boulder Loop	Site City: Bailyton	State: TN	Zip: 37745
	Phone: ( )423-234-0991	E-mail: dannyneely550@yahoo.com		

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence: 2

All non-exceptional biosolids land application sites that have been approved by the division prior to the effective date of this permit will be covered under this permit upon receipt of the signed certification statement, completed NOI and a copy of site approval letter(s).

A. OPERATIONAL INFORMATION:
Estimated annual amount of biosolids generated (dry weight basis) 40 (tons)
Estimated annual amount of biosolids to be land applied (dry weight basis) 40 (tons)

B. BIOSOLIDS TREATMENT PROCESS: Please provide a description of the biosolids treatment process used prior to biosolids being land applied (use a separate sheet if necessary):

Waste sludge is sent to aerobic digester for further stabilization and dewatering. Once the sludge meets the requirements for land application, it is spread on the field by spreader truck or manure spreader. Occasionally, Sludge is sent to the drying beds for further dewatering.

C. CHEMICAL ANALYSIS: Indicate which contaminant standard(s) the biosolids meet:
Table 1 Ceiling Contaminant Concentrations: [x] **Table 3 Contaminant Concentrations:** [x]

- Submit analytical results to demonstrate eligibility for and compliance with the quality criteria specified in the General Permit.
- Submit PCB and TCLP analytical results that are less five years old.

D. PATHOGEN REDUCTION LEVEL ACHIEVED: Indicate alternative used to achieve the pathogen reduction. For Class A, Alternatives 5 and 6; for Class B, Alternatives 2 and 3, list the specific Process to Further Reduce Pathogens (PFRP) or Process to Significantly Reduce Pathogens (PSRP).

Class A: [ ] **Alternative 1** [ ] **Alternative 2** [ ] **Alternative 3**
[ ] **Alternative 4** [ ] **Alternative 5** _____ [ ] **Alternative 6** _____
(List PFRP) **(List Eq. PFRP)**

Class B: [■] **Alternative 1** [ ] **Alternative 2** _____ [ ] **Alternative 3** _____
(List PSRP) **(List Eq. PSRP)**

Provide a detailed description of the pathogen treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate pathogen reduction is being achieved:

Waste activated sludge is aerobically digested until required vector attraction reduction is achieved.

E. VECTOR ATTRACTION REDUCTION LEVEL ACHIEVED: Indicate the option used to achieve the vector attraction reduction.

☐ **Option 1** ☐ **Option 2** ☐ **Option 3** ■ **Option 4**
☐ **Option 5** ☐ **Option 6** ☐ **Option 7** ☐ **Option 8**

If one of the vector attraction reduction Options 1 - 5 is selected, do the biosolids meet Class A pathogen reduction requirements prior to or at the same time as meeting the vector attraction reduction requirements?

☐ **Yes** ■ **No**

Provide a detailed description of the vector attraction reduction treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate vector attraction reduction is being achieved:

Waste activated sludge is aerobically digested until required vector attraction reduction is achieved.

F. If one of the vector attraction reduction Options 1 - 8 above was not performed, indicate how the vector attraction reduction will be performed on the field as part of the land application process:

☐ **Option 9 (Subsurface Injection)** ☐ **Option 10 (Incorporation)**

G. SAMPLING PLAN: Include a detailed copy of the biosolids sampling plan as specified in the instructions. The sampling plan must address sampling protocols for contaminants, pathogen reduction, and vector attraction reduction quality criteria.

Please see attached.

H. LAND APPLICATION AREA(s): Include a list of land application area(s) that will be used for disposal of biosolids. Attach a detailed map showing appropriate buffers in accordance with section 3.2.1 (add additional pages if necessary)

Area Number	Area (acres)	Application Rate (tons/acre) per section 3.2.2	Latitude (decimal)	Longitude (decimal)
1	45	2.68 Tons per acre	36.20.00	82.51.00

I. CERTIFICATION: I certify, under penalty of law, that contaminant concentrations in the biosolids, pathogen reduction, vector attraction reduction, and other quality criteria of the biosolids stated in the regulations have been met or, if appropriate, will be met prior to land application of biosolids. I further certify that other information in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my own knowledge as well as the inquiry of the person(s) who manage the system, or those directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief, is true, accurate and complete. I further acknowledge that the facility or generator of biosolids described above is eligible for coverage under TDEC's General Permit for the Land Application of Biosolids. I am aware that there are significant penalties for submitting false information, including possibility of fines and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Name: Thomas F. Casteel **Title:** Mayor

Signature: Thomas F. Casteel

Telephone: ( ) - **Date Signed:** 1 / 14 / 19

NOTE: In evaluating NOI forms, TDEC may request additional information to complete its review to determine the eligibility for coverage under TDEC's General Permit.

Submit the original completed and signed form to *Water.Permits@tn.gov* or:
Biosolids NOI Processing - Division of Water Resources
William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243-1102

APPENDIX 1

CERTIFICATION OF HAZARDOUS WASTE DETERMINATION

In accordance with 40 CFR 262.11(c), I hereby certify, under penalty of law, that the biosolids generated by Bailey Jun STP (name of wastewater treatment facility) does not meet the criterion of hazardous waste in 40 CFR 261.

NAME AND OFFICIAL TITLE (Use agency or professional seal as appropriate)

Name: DANNY P. NEELY **Title:** Plant Operator

Signature: Danny P. Neely

Telephone: (423) 234 - 0991 **Date Signed:** 1 / 18 / 19

APPENDIX 2

State Biosolids Coordinator
Department of Environmental and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower, 11th Floor
312 Rosa L. Parks Avenue
Nashville, TN 37243-1102
(615) 532-0625

RECEIVED
JAN 24 2019
JOHNSON CITY
ENV. FIELD OFFICE

Site Name		County	
E.A.C.	Johnson City	Site Tracking Number	LA
Laboratory Name	ESC	Date of Analysis	4-17-19

Sludge/Biosolids Analysis	DRY WT.	Units
Total Kjeldahl Nitrogen, (TKN)	26,400	mg/kg
Ammonium nitrogen, (NH_4-N)	790	mg/kg
Nitrate plus Nitrite nitrogen, (NO_3-N + NO_2-N)	12,300	mg/kg

Attach a copy of the laboratory analysis used for these calculations to this report.

Crop Type: Hay — 120 lb N/acre/year

To convert milligrams per kilogram to pounds per ton multiply by 0.002.

		Calculated	Units
1.	**Available nitrogen from biosolids.**		
	a. Total Kjeldahl Nitrogen, (TKN). (TKN(mg/kg) x 0.002) — 26,400 X .002	53	lbs/ton
	b. Ammonium nitrogen, (NH_4-N). (NH_4-N (mg/kg) x 0.002) — 790 X .002	2	lbs/ton
	c. Nitrate plus Nitrite nitrogen, (NO_3-N + NO_2-N). (NO_3-N + NO_2-N) mg/kg x 0.002) — 12,300 X .002	25	lbs/ton
	d. Total available inorganic nitrogen. (1b x Kv) plus 1c) — (2 X .5) + 25. Obtain Kv from Exhibit C. .5 Surface applied liquid	26	lbs/ton
	e. Organic nitrogen in biosolids. (Subtract 1b from 1a.) — 53 − 2	51	lbs/ton
	f. Available organic nitrogen for the first year of application. (Multiply 1e by F_M for anaerobic or aerobic process.) — 51 X .3. Obtain F_M from Exhibit D. .3	15	lbs/ton
	g. Total nitrogen available from biosolids. Add 1d and 1f. — 26 + 15	41	lbs/ton
2.	**Available nitrogen in the soil.** a. Soil test results of background nitrogen in soil. b. or, Estimate of available nitrogen from previous biosolids applications. (If estimate, attach explaination of how estimated.)	10	lbs/ton
3.	**Nitrogen supplied from other sources.**		
	a. Nitrogen from supplemental fertilizers. (If appropriate)	0	lbs/ton
	b. Nitrogen from irrigation water. (If appropriate)		lbs/ton
	c. Nitrogen from previous crop. (Unless #2 is based in soil testing.)		lbs/ton
	d. Other (If appropriate) (specify)_____		lbs/ton
	e. Total nitrogen from other sources; add a,b,c and d if available.		lbs/ton
4.	**Total nitrogen available from existing sources.** Add 2. And 3e.	10	lbs/ton
5.	**Total nitrogen requirement of crop.** (Obtain information from Exhibit E or agricultural extension agents or other agronomy professionals.)	120	lbs/acre
6.	**Supplemental nitrogen needed from biosolids.** (Subtract 4. from 5.)	110	lbs/ton
7.	**Agronomic loading rate.** (Divide 6. by 1g.) — 110 / .41 = 2,68 T/A		tons/acre

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Initial Site approval is for one (1) year. Approved by_____ Date_____

These calculations are required to be updated with new sample analysis and re-submitted on an annual basis on or before, February 19th to the Central office of the Tennessee Division of Water Pollution Control.

Actual Applied: 6.86 T / 45A = .15 T/A

COMMENTS

1.54% TS

2.68 T/A × 2000 lbs/T × 8.34 lbs/gal / 8.34 lbs × ...

CN - 1179

RDA Pending

Sample Collection Data

Date of Sampling	Time of Sampling	Opr	Sampling Location	Type of Sample	Preservative Used	Container Type
4/17/18	2:00pm	DN	Digester	Grab	None	Polyethelene

Part #2: Sludge Solids Contents - Standard Method 2540-B

Date of Analysis	Time of Analysis	Opr Doing Analysis	Size of Sample	Quality Control	Description of Contents
4/17/18	2:10	DN	3:00mL	Duplicate	Sludge

Sample ID#	TARE Weight	TARE & Solids	Net Solids (g/sample)	Percent (%) Solids	Total grams per Liter
D.gP2	0.3588	1.7061	1.3473 [1]	0.013473 [2]	13.473 [3]

Part #3: Specific Oxygen Uptake Rate (SOUR)-Method 4500-O-G

Temp °C 16.00

Duration in Minutes	Dissolved O2 (mg/L)	Duration in Minutes	Dissolved O2 (mg/L)	Duration in Minutes	Dissolved O2 (mg/L)
0	9.39	6	9.11	12	8.83
1	9.34	7	9.05	13	8.80
2	9.27	8	9.00	14	8.76
3	9.22	9	8.95	15	8.72
4	9.18	10	8.90	20	
5	9.14	11	8.87	30	

Ending Temp °C 17.40

0.67/15=

SOUR mg/L/min	SOUR mg/L/hr	SOUR mg/g/hr	Date of Analysis	Time of Analysis	Operator
0.049 [3]	2.68 [4]	0.20 [5]	4/17/18	2:45	DN

NOTE: Net solids / sample size * 100 = grams per 100 mL or Percent (%) solids.

② Percent (%) solids * 10 = grams per liter.

③ Total O2 uptake (mg/L) / total duration minutes = SOUR (mg/L/min).

④ SOUR (mg/L/min) * 60 = SOUR (mg/L/hr).

⑤ SOUR (mg/L/hr) / grams per liter = SOUR (mg/g/hr).

⑥ SOUR must be < 1.5 mg/g/hr for vector attraction reduction.

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 05, 2018

Town of Baileyton WWTP

Sample Delivery Group: L986157

Samples Received: 04/17/2018

Project Number:

Description:

Report To: Mr. Danny Neely
6530 Horton Highway
Greeneville, TN 37745

Entire Report Reviewed By: Stacy Kennedy

Stacy Kennedy
Project Manager

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Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

SLUDGE L986157-01 Solid

			Collected by	Collected date/time	Received date/time
			Danny Neely	04/16/18 12:30	04/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1099317	1	04/17/18 20:47	04/17/18 21:05	BS
Wet Chemistry by Method 350.1	WG1101632	1	04/22/18 12:03	04/22/18 13:55	KK
Wet Chemistry by Method 4500NOrg C-2011	WG1099701	1	04/19/18 09:00	04/20/18 12:45	KK
Wet Chemistry by Method 9056A	WG1099259	10	04/17/18 16:06	04/19/18 01:08	MAJ
Mercury by Method 7471A	WG1100236	1	04/19/18 09:28	04/20/18 01:26	EL
Metals (ICP) by Method 6010B	WG1100250	.1	04/19/18 10:30	04/19/18 22:25	JDG

SLUDGE L986157-02 Solid

			Collected by	Collected date/time	Received date/time
			Danny Neely	04/16/18 12:30	04/17/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Microbiology by Method EPA 1681	WG1099250	1000	04/17/18 11:30	04/17/18 11:30	KMR

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.

Stacy Kennedy

Stacy Kennedy
Project Manager

Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	%				
Total Solids	1.54		1	04/17/2018 21:05	WG1099317

Wet Chemistry by Method 350.1

Analyte	Result (wet)	RDL (Wet)	Result (dry)	RDL (dry)	Qualifier	Dilution	Analysis date / time	Batch
	mg/kg	mg/kg	mg/kg	mg/kg				
Ammonia Nitrogen	12.2	5.00	790	324		1	04/22/2018 13:55	WG1101632

Wet Chemistry by Method 4500NOrg C-2011

Analyte	Result (wet)	RDL (Wet)	Result (dry)	RDL (dry)	Qualifier	Dilution	Analysis date / time	Batch
	mg/kg	mg/kg	mg/kg	mg/kg				
Kjeldahl Nitrogen, TKN	408	20.0	26400	1290		1	04/20/2018 12:45	WG1099701

Wet Chemistry by Method 9056A

Analyte	Result (wet)	RDL (Wet)	Result (dry)	RDL (dry)	Qualifier	Dilution	Analysis date / time	Batch
	mg/kg	mg/kg	mg/kg	mg/kg				
Nitrate as (N)	190	10.0	12300	647		10	04/19/2018 01:08	WG1099259

Mercury by Method 7471A

Analyte	Result (wet)	RDL (Wet)	Result (dry)	RDL (dry)	Qualifier	Dilution	Analysis date / time	Batch
	mg/kg	mg/kg	mg/kg	mg/kg				
Mercury	ND	0.0200	ND	1.29		1	04/20/2018 01:26	WG1100236

Metals (ICP) by Method 6010B

Analyte	Result (wet)	RDL (Wet)	Result (dry)	RDL (dry)	Qualifier	Dilution	Analysis date / time	Batch
	mg/kg	mg/kg	mg/kg	mg/kg				
Arsenic	ND	0.100	ND	6.47		1	04/19/2018 22:25	WG1100250
Cadmium	0.0204	0.0200	1.32	1.29		1	04/19/2018 22:25	WG1100250
Copper	3.90	0.100	252	6.47		1	04/19/2018 22:25	WG1100250
Lead	0.139	0.0500	9.02	3.24		1	04/19/2018 22:25	WG1100250
Molybdenum	0.105	0.0500	6.80	3.24		1	04/19/2018 22:25	WG1100250
Nickel	0.253	0.200	16.4	12.9		1	04/19/2018 22:25	WG1100250
Selenium	ND	0.200	ND	12.9		1	04/19/2018 22:25	WG1100250
Zinc	14.4	0.500	930	32.4		1	04/19/2018 22:25	WG1100250

Microbiology by Method EPA 1681

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	MPN/g				
Fecal Coliform -Geom Mean	<8611.2		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -1	<8084.6		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -2	<8627.6		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -3	<8944.6		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -4	<8218.6		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -5	<8477.8		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -6	<9771.3		1000	04/17/2018 11:30	WG1099250
Fecal Coliform -7	<8266.5		1000	04/17/2018 11:30	WG1099250

Method Blank (MB)

(MB) R3302910-1 04/17/18 21:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

L986157-01 Original Sample (OS) • Duplicate (DUP)

(OS) L986157-01 04/17/18 21:05 • (DUP) R3302910-4 04/17/18 21:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	1.54	1.55	1	0.281		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3302910-2 04/17/18 21:05 • (LCSD) R3302910-3 04/17/18 21:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	%	%	%	%	%	%			%	%
Total Solids	50.0	50.0	50.0	100	99.9	85.0-115			0.0360	5

Method Blank (MB)

(MB) R3303747-1 04/22/18 13:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Ammonia Nitrogen	U		1.57	5.00

L986384-01 Original Sample (OS) • Duplicate (DUP)

(OS) L986384-01 04/22/18 13:56 • (DUP) R3303747-6 04/22/18 13:57

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/kg	mg/kg		%		%
Ammonia Nitrogen	4.97	6.47	1	26.3	P1	20

L986713-05 Original Sample (OS) • Duplicate (DUP)

(OS) L986713-05 04/22/18 14:11 • (DUP) R3303747-9 04/22/18 14:12

Analyte	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/kg	mg/kg		%		%
Ammonia Nitrogen	6.52	2.44	1	91.2	J P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303747-2 04/22/18 13:40 • (LCSD) R3303747-3 04/22/18 13:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Ammonia Nitrogen	500	460	469	91.9	93.8	90.0-110			2.05	20

L985478-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L985478-01 04/22/18 13:43 • (MS) R3303747-4 04/22/18 13:44 • (MSD) R3303747-5 04/22/18 13:45

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Ammonia Nitrogen	603	U	299	280	49.6	46.4	1	80.0-120	J6	J6	6.67	20

L986388-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L986388-01 04/22/18 14:01 • (MS) R3303747-7 04/22/18 14:02 • (MSD) R3303747-8 04/22/18 14:05

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Ammonia Nitrogen	628	U	369	347	58.7	55.2	1	80.0-120	J6	J6	6.15	20

Method Blank (MB)

(MB) R3303490-1 04/20/18 12:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Kjeldahl Nitrogen, TKN	U		4.48	20.0

L986111-01 Original Sample (OS) • Duplicate (DUP)

(OS) L986111-01 04/20/18 13:00 • (DUP) R3303490-8 04/20/18 13:01

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	1970	2620	5	28.4	J3	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303490-2 04/20/18 12:29 • (LCSD) R3303490-3 04/20/18 12:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	400	382	404	95.5	101	90.0-110			5.60	20

Method Blank (MB)

(MB) R3303173-1 04/18/18 15:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Nitrate	U		0.0116	1.00

L986111-01 Original Sample (OS) • Duplicate (DUP)

(OS) L986111-01 04/18/18 18:51 • (DUP) R3303173-4 04/18/18 19:54

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	23.2	35.2	1	41.2	J3	15

L986229-01 Original Sample (OS) • Duplicate (DUP)

(OS) L986229-01 04/19/18 02:10 • (DUP) R3303173-8 04/19/18 02:31

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	23.7	24.0	10	1.29		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303173-2 04/18/18 15:48 • (LCSD) R3303173-3 04/18/18 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Nitrate	20.0	19.1	19.1	95.6	95.4	80.0-120			0.288	15

L986111-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L986111-02 04/18/18 20:57 • (MS) R3303173-6 04/18/18 21:17 • (MSD) R3303173-7 04/18/18 21:38

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	50.0	8.41	59.0	56.2	101	95.6	1	80.0-120			4.93	15

Method Blank (MB)

(MB) R3303318-1 04/20/18 00:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.00280	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

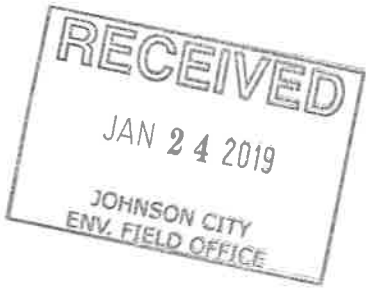
(LCS) R3303318-2 04/20/18 00:17 • (LCSD) R3303318-3 04/20/18 00:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.278	0.288	92.6	96.0	80.0-120			3.67	20

L985997-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L985997-02 04/20/18 00:22 • (MS) R3303318-4 04/20/18 00:25 • (MSD) R3303318-5 04/20/18 00:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.00775	0.279	0.285	90.5	92.5	1	75.0-125			2.10	20



Method Blank (MB)

(MB) R3303324-1 04/19/18 21:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.460	1.00
Cadmium	U		0.0700	0.200
Copper	0.544	J	0.500	1.00
Lead	U		0.190	0.500
Molybdenum	U		0.160	0.500
Nickel	U		0.490	2.00
Selenium	U		0.620	2.00
Zinc	U		0.590	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303324-2 04/19/18 22:02 • (LCSD) R3303324-3 04/19/18 22:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	95.4	96.3	95.4	96.3	80.0-120			0.903	20
Cadmium	100	94.3	95.6	94.3	95.6	80.0-120			1.37	20
Copper	100	104	106	104	106	80.0-120			1.37	20
Lead	100	98.0	99.0	98.0	99.0	80.0-120			0.979	20
Molybdenum	100	98.3	99.2	98.3	99.2	80.0-120			0.891	20
Nickel	100	99.7	101	99.7	101	80.0-120			0.853	20
Selenium	100	98.7	100	98.7	100	80.0-120			1.27	20
Zinc	100	98.7	103	98.7	103	80.0-120			4.68	20

L986378-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L986378-01 04/19/18 22:08 • (MS) R3303324-6 04/19/18 22:18 • (MSD) R3303324-7 04/19/18 22:22

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	104	U	98.1	92.8	94.0	88.9	1	75.0-125			5.53	20
Cadmium	104	U	100	94.3	95.9	90.4	1	75.0-125			5.95	20
Copper	104	26.8	141	132	110	101	1	75.0-125			6.85	20
Lead	104	6.53	112	113	101	102	1	75.0-125			0.534	20
Molybdenum	104	U	97.6	91.5	93.5	87.7	1	75.0-125			6.45	20
Nickel	104	39.4	122	119	79.0	76.2	1	75.0-125			2.45	20
Selenium	104	U	103	96.3	98.4	92.3	1	75.0-125			6.38	20
Zinc	104	74.7	160	156	82.0	78.3	1	75.0-125			2.45	20

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.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
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.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
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.
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.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
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
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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.

Cp
2 Tc
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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	T 104704245-17-14
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 [6]	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.

Town of Baileyton WWTP

6530 Horton Highway
Greeneville, TN 37745

Billing Information:
Barbara Tilson
6530 Horton Highway
Greeneville, TN 37745

Report to: Mr. Danny Neely

Email To: dannyneely550@yahoo.com

Project Description:

City/State Collected:

Phone: 423-620-8208
Fax:

Client Project #

Lab Project # BAILEY02-SLUDGE

Collected by (print): Danny Neely

Site/Facility ID #

P.O. #

Collected by (signature):

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	FCLS Microbiological	Metals 250mlHDPE-NoPres	NITRATE, NH3, TKN 250mlHDPE-NoPres	TSSLUDGE 250mlHDPE-NoPres
SLUDGE	Grab	SS	N/A	4/16/18	1230	3		X	X	X
SLUDGE	↓	SS	↓	↓	1230	9	X			

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* 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 ____

Tracking # 7205 4444 8521

Relinquished by: (Signature) Danny P. Neely — Date: 4/16/18 — Time: 1235
Received by: (Signature) [signature]

Relinquished by: (Signature) — Date: — Time:
Received by: (Signature)

Relinquished by: (Signature) — Date: — Time:
Received for lab by: (Signature) [signature] — Date: 4/17/18 — Time: 0840

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.6 °C Bottles Received: 12

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

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

Chain of Custody Page ___ of ___

ESC LABORATORIES
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 486157
Table G171
Acctnum: BAILEY02
Template: T111405
Prelogin: P647650
TSR: 650 - Linda Cashman
PB: 4/4/18 AD
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	01
	02

CLIENT: **Baileyton** ESC L# **L986157**

DATE ON: 4/17/2018 DATE OFF: 4/18/2018

Data entered into excel spreadsheet by: **MH**

Sample No.		Plate	ml filtered
1		A	0.001
2		B	0.0001
3		C	0.00001
4		D	0.000001
5			
6			
7			

<---Largest Volumn Tested

Enter data into areas that are in **blue font.

sample type: Liquid

From Table 4 Method 1681

Sample No.	Combination of Positives			MPN/mL	Dilution	MPN Result	Log Values
1	0	0	0	< 0.1803	0.001	< 8084.6	3.90765596
2	0	0	0	< 0.1803	0.001	< 8627.6	3.935889882
3	0	0	0	< 0.1803	0.001	< 8944.6	3.951561377
4	0	0	0	< 0.1803	0.001	< 8218.6	3.914795543
5	0	0	0	< 0.1803	0.001	< 8477.8	3.92828367
6	0	0	0	< 0.1803	0.001	< 9771.3	3.989951341
7	0	0	0	< 0.1803	0.001	< 8266.5	3.917324295

3.93506601

GEO MEAN < 8611.2

[FCMPN/g]= $\frac{\text{(MPN/1mL) X 100}}{\text{(Largest Vol tested) X (\% total solids)}}$

% Total Solids = $\frac{\text{Dry wt - Initial wt}}{\text{Wet wt - Initial wt}}$ X 100

	Percent Solids			
Sample #	Initial Weight of	Wet Weight	Dry weight	% Total Solids
1	1.31837	6.8816	1.44244	2.23
2	1.30809	6.9445	1.42588	2.09
3	1.30892	7.03982	1.42444	2.02
4	1.29977	6.96205	1.42399	2.19
5	1.30372	6.97111	1.42425	2.13
6	1.29279	7.00056	1.39811	1.85
7	1.31147	6.93575	1.43414	2.18

Class B Fecal Coliform Analysis by MPN- EPA 1681

[Liquid or Solid]

Client Name: Baldwin

ESC Sample #: L986157-02

Final pH must be between 7.0-7.5 and must not use more than 15mL of HCl or NaOH per 100mL

	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
1	Date/Time: 4-17-18 @1130	Date/Time: 4-17-18 @1420	Date/Time: 4-18-18 1040					Initial pH	6.2
	Temp: 35	Temp: 44.5	Temp: 44.5					Final pH	7.5
	Analyst: LR	Analyst: CM	Analyst: LR					Method Blank	0
	Sample Collection	Combination of Positive: <0.1803 0-0-0						Negative Con	0
		MPN/mL from table:						Positive Con	X
								MPN Result	<8054.6
2	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.3
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0						Negative Con	0
		MPN/mL from table: <0.1803						Positive Con	X
								MPN Result	<8027.6
3	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.5
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0 <0.1803						Negative Con	0
		MPN/mL from table						Positive Con	X
								MPN Result	<8944.6
4	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.5
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0 <0.1803						Negative Con	0
		MPN/mL from table:						Positive Con	X
								MPN Result	<8218.6
5	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.3
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0 <0.1803						Negative Con	0
		MPN/mL from table:						Positive Con	X
								MPN Result	<8477.8
6	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.4
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0 <0.1803						Negative Con	0
		MPN/mL from table:						Positive Con	X
								MPN Result	<9771.3
7	Set up 35 deg	Move to 44.5 deg	Test end info	1,000x	10,000x	100,000x	1,000,000x		
	Date/Time:	Date/Time:	Date/Time:					Initial pH	6.2
	Temp:	Temp:	Temp:					Final pH	7.2
	Analyst:	Analyst:	Analyst:					Method Blank	0
	Sample Collection	Combination of Positive: 0-0-0 <0.1803						Negative Con	0
		MPN/mL from table:						Positive Con	X
								MPN Result	<8206.5

0.2mL of 1N NaOH

0.2mL of 1N NaOH

0.2mL of 1N NaOH

0.2mL of 1N NaOH

0.2mL of 1N NaOH

0.2mL of 1N NaOH

0.2mL of 1N NaOH

X denotes Positive tube

O denotes Negative tube

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1/111

Total Solids Analysis

(30g +/-.1g)

Sample	Dish Label	Initial wt	Wet wt	Dry wt	%Tot Solids	Amt used (g)
Sample #1	B1	1.31837	6.55760	1.44344	2.23	30mL
Sample #2	B2	1.30809	6.94450	1.43588	2.09	
Sample #3	B3	1.30572	7.03482	1.43444	2.02	
Sample #4	B4	1.24977	6.96205	1.40399	2.19	
Sample #5	B5	1.30372	6.97111	1.43435	2.13	
Sample #6	B6	1.29704	7.60026	1.39811	2.1.85	
Sample #7	B7	1.31147	6.93525	1.43414	2.18	

OMH 4-23-18

^(only need for OPR or MS)

Media/Reagents Lot #		Exp date
^TSA Slant Lot #:	NA	NA
^1% LTB Lot #:	L	L
A1 medium Lot #:	ESC3376/ESC3804	2/24/19 / 2/2/19
Phosphate Buffer:	ESC 36627	7/30/19
Positive Control: *E.coli*	032318	6/23-18
Negative Control: *E.aerogenes*	032218	6/22-18
NaOH Lot:	ESC 34415	6/10/18
HCl Lot:	NA	NA

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Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 14, 2018

Town of Baileyton WWTP

Sample Delivery Group: L1051120

Samples Received: 12/08/2018

Project Number:

Description:

Report To: Mr. Danny Neely
6530 Horton Highway
Greeneville, TN 37745

Entire Report Reviewed By: Cassandra Foster

Cassandra Foster
Project Manager

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SLUDGE L1051120-01 Solid

			Collected by	Collected date/time	Received date/time
			Danny P. Neely	12/07/18 09:20	12/08/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Polychlorinated Biphenyls (GC) by Method 8082	WG1208497	14.6	12/11/18 07:30	12/11/18 20:16	TD

SLUDGE L1051120-02 Waste

			Collected by	Collected date/time	Received date/time
			Danny P. Neely	12/07/18 09:20	12/08/18 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Preparation by Method 1311	WG1208360	1	12/10/18 13:24	12/10/18 13:24	CGD
Preparation by Method 1311	WG1209109	1	12/11/18 14:52	12/11/18 14:52	RT
Mercury by Method 7470A	WG1209251	1	12/11/18 17:45	12/12/18 09:26	ABL
Metals (ICP) by Method 6010B	WG1209292	1	12/11/18 21:33	12/12/18 03:05	TRB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209542	1	12/12/18 15:57	12/12/18 15:57	TJJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1209842	1	12/13/18 09:08	12/14/18 04:52	AO

Cp
2 Tc
3 Ss
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5 Sr
6 Qc
7 Gl
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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.

Cassandra Foster

Cassandra Foster
Project Manager

Qn
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
PCB 1016	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1221	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1232	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1242	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1248	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1254	ND		0.248	14.6	12/11/2018 20:16	WG1208497
PCB 1260	ND		0.248	14.6	12/11/2018 20:16	WG1208497
(S) Decachlorobiphenyl	*81.0*		*10.0-135*		*12/11/2018 20:16*	WG1208497
(S) Tetrachloro-m-xylene	*88.2*		*10.0-139*		*12/11/2018 20:16*	WG1208497

Sample Narrative:

L1051120-01 WG1208497: Dilution due to matrix impact during extraction procedure

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/10/2018 1:24:22 PM	WG1208360
TCLP ZHE Extraction	-		12/11/2018 2:52:13 PM	WG1209109
Fluid	1		12/10/2018 1:24:22 PM	WG1208360
Initial pH	7.25		12/10/2018 1:24:22 PM	WG1208360
Final pH	4.75		12/10/2018 1:24:22 PM	WG1208360

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	12/12/2018 09:26	WG1209251

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	12/12/2018 03:05	WG1209292
Barium	0.220		0.100	100	1	12/12/2018 03:05	WG1209292
Cadmium	ND		0.100	1	1	12/12/2018 03:05	WG1209292
Chromium	ND		0.100	5	1	12/12/2018 03:05	WG1209292
Lead	ND		0.100	5	1	12/12/2018 03:05	WG1209292
Selenium	ND		0.100	1	1	12/12/2018 03:05	WG1209292
Silver	ND		0.100	5	1	12/12/2018 03:05	WG1209292

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Benzene	ND		0.0500	0.50	1	12/12/2018 15:57	WG1209542
Carbon tetrachloride	ND		0.0500	0.50	1	12/12/2018 15:57	WG1209542
Chlorobenzene	ND		0.0500	100	1	12/12/2018 15:57	WG1209542
Chloroform	ND		0.250	6	1	12/12/2018 15:57	WG1209542
1,2-Dichloroethane	ND		0.0500	0.50	1	12/12/2018 15:57	WG1209542
1,1-Dichloroethene	ND		0.0500	0.70	1	12/12/2018 15:57	WG1209542
2-Butanone (MEK)	ND		0.500	200	1	12/12/2018 15:57	WG1209542
Tetrachloroethene	ND		0.0500	0.70	1	12/12/2018 15:57	WG1209542
Trichloroethene	ND		0.0500	0.50	1	12/12/2018 15:57	WG1209542
Vinyl chloride	ND		0.0500	0.20	1	12/12/2018 15:57	WG1209542
(S) Toluene-d8	*97.0*		*80.0-120*			*12/12/2018 15:57*	WG1209542
(S) Dibromofluoromethane	*119*		*75.0-120*			*12/12/2018 15:57*	WG1209542
(S) a,a,a-Trifluorotoluene	*110*		*80.0-120*			*12/12/2018 15:57*	WG1209542
(S) 4-Bromofluorobenzene	*95.5*		*77.0-126*			*12/12/2018 15:57*	WG1209542

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
1,4-Dichlorobenzene	ND		0.100	7.50	1	12/14/2018 04:52	WG1209842
2,4-Dinitrotoluene	ND		0.100	0.13	1	12/14/2018 04:52	WG1209842
Hexachlorobenzene	ND		0.100	0.13	1	12/14/2018 04:52	WG1209842
Hexachloro-1,3-butadiene	ND		0.100	0.50	1	12/14/2018 04:52	WG1209842
Hexachloroethane	ND		0.100	3	1	12/14/2018 04:52	WG1209842
Nitrobenzene	ND		0.100	2	1	12/14/2018 04:52	WG1209842
Pyridine	ND		0.100	5	1	12/14/2018 04:52	WG1209842
3&4-Methyl Phenol	ND		0.100	400	1	12/14/2018 04:52	WG1209842
2-Methylphenol	ND		0.100	200	1	12/14/2018 04:52	WG1209842
Pentachlorophenol	ND		0.100	100	1	12/14/2018 04:52	WG1209842
2,4,5-Trichlorophenol	ND		0.100	400	1	12/14/2018 04:52	WG1209842

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

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2,4,6-Trichlorophenol	ND		0.100	2	1	12/14/2018 04:52	WG1209842
(S) 2-Fluorophenol	*42.5*		*10.0-120*			*12/14/2018 04:52*	WG1209842
(S) Phenol-d5	*22.3*		*10.0-120*			*12/14/2018 04:52*	WG1209842
(S) Nitrobenzene-d5	*50.2*		*10.0-127*			*12/14/2018 04:52*	WG1209842
(S) 2-Fluorobiphenyl	*59.2*		*10.0-130*			*12/14/2018 04:52*	WG1209842
(S) 2,4,6-Tribromophenol	*70.0*		*10.0-155*			*12/14/2018 04:52*	WG1209842
(S) p-Terphenyl-d14	*66.5*		*10.0-128*			*12/14/2018 04:52*	WG1209842

Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) R3367412-1 12/12/18 08:22

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Mercury	U		0.00330	0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3367412-2 12/12/18 08:25 • (LCSD) R3367412-3 12/12/18 08:27

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.0300	0.0308	0.0306	103	102	80.0-120			0.657	20

L1050973-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050973-02 12/12/18 08:30 • (MS) R3367412-4 12/12/18 08:37 • (MSD) R3367412-5 12/12/18 08:39

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.0300	ND	0.0297	0.0289	98.9	96.2	1	75.0-125			2.84	20

L1050955-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050955-06 12/12/18 08:42 • (MS) R3367412-6 12/12/18 08:44 • (MSD) R3367412-7 12/12/18 08:47

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.0300	ND	0.0329	0.0315	110	105	1	75.0-125			4.36	20

Method Blank (MB)

(MB) R3367309-1 12/12/18 01:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	0.0380	J	0.0333	0.100
Barium	U		0.0333	0.100
Cadmium	U		0.0333	0.100
Chromium	U		0.0333	0.100
Lead	U		0.0333	0.100
Selenium	U		0.0333	0.100
Silver	U		0.0333	0.100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3367309-2 12/12/18 01:47 • (LCSD) R3367309-3 12/12/18 01:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	9.13	9.14	91.3	91.4	80.0-120			0.137	20
Barium	10.0	9.51	9.54	95.1	95.4	80.0-120			0.304	20
Cadmium	10.0	9.05	9.09	90.5	90.9	80.0-120			0.400	20
Chromium	10.0	9.20	9.25	92.0	92.5	80.0-120			0.588	20
Lead	10.0	9.06	9.11	90.6	91.1	80.0-120			0.531	20
Selenium	10.0	9.11	9.14	91.1	91.4	80.0-120			0.324	20
Silver	2.00	1.77	1.78	88.6	89.2	80.0-120			0.611	20

L1050920-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050920-01 12/12/18 01:52 • (MS) R3367309-5 12/12/18 01:57 • (MSD) R3367309-6 12/12/18 02:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.43	9.42	94.3	94.2	1	75.0-125			0.0865	20
Barium	10.0	11.5	20.9	20.6	94.7	91.0	1	75.0-125			1.75	20
Cadmium	10.0	ND	9.24	9.27	92.4	92.7	1	75.0-125			0.283	20
Chromium	10.0	ND	9.21	9.20	92.1	92.0	1	75.0-125			0.189	20
Lead	10.0	ND	9.05	9.06	90.5	90.6	1	75.0-125			0.0366	20
Selenium	10.0	ND	9.45	9.53	94.5	95.3	1	75.0-125			0.862	20
Silver	2.00	ND	1.81	1.81	90.7	90.7	1	75.0-125			0.00810	20

L1050955-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050955-06 12/12/18 02:03 • (MS) R3367309-7 12/12/18 02:05 • (MSD) R3367309-8 12/12/18 02:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Arsenic	10.0	ND	9.25	9.17	92.5	91.7	1	75.0-125			0.877	20
Barium	10.0	ND	9.57	9.53	95.7	95.3	1	75.0-125			0.445	20
Cadmium	10.0	ND	9.12	9.10	91.2	91.0	1	75.0-125			0.206	20
Chromium	10.0	ND	9.23	9.29	92.3	92.9	1	75.0-125			0.654	20
Lead	10.0	ND	9.09	9.06	90.9	90.6	1	75.0-125			0.417	20
Selenium	10.0	ND	9.17	9.15	91.7	91.5	1	75.0-125			0.206	20
Silver	2.00	ND	1.79	1.80	89.4	90.0	1	75.0-125			0.682	20

Method Blank (MB)

(MB) R3368080-3 12/12/18 14:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0165	0.0500
Carbon tetrachloride	U		0.0165	0.0500
Chlorobenzene	U		0.0165	0.0500
Chloroform	U		0.0825	0.250
1,2-Dichloroethane	U		0.0165	0.0500
1,1-Dichloroethene	U		0.0165	0.0500
2-Butanone (MEK)	U		0.165	0.500
Tetrachloroethene	U		0.0165	0.0500
Trichloroethene	U		0.0165	0.0500
Vinyl chloride	U		0.0165	0.0500
(S) Toluene-d8	*97.5*			*80.0-120*
(S) Dibromofluoromethane	*109*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*114*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3368080-1 12/12/18 12:07 • (LCSD) R3368080-2 12/12/18 12:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0245	0.0243	97.9	97.2	70.0-123			0.757	20
Carbon tetrachloride	0.0250	0.0284	0.0288	114	115	68.0-126			1.41	20
Chlorobenzene	0.0250	0.0239	0.0267	95.8	107	80.0-121			10.9	20
Chloroform	0.0250	0.0247	0.0257	98.9	103	73.0-120			3.75	20
1,2-Dichloroethane	0.0250	0.0226	0.0231	90.3	92.5	70.0-128			2.41	20
1,1-Dichloroethene	0.0250	0.0274	0.0274	110	110	71.0-124			0.0310	20
2-Butanone (MEK)	0.125	0.105	0.0947	83.7	75.7	44.0-160			10.1	20
Tetrachloroethene	0.0250	0.0237	0.0229	94.9	91.5	72.0-132			3.56	20
Trichloroethene	0.0250	0.0233	0.0243	93.1	97.2	78.0-124			4.28	20
Vinyl chloride	0.0250	0.0269	0.0281	108	112	67.0-131			4.30	20
(S) Toluene-d8				*100*	*105*	*80.0-120*				
(S) Dibromofluoromethane				*113*	*115*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*111*	*112*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*96.1*	*77.0-126*				

L1051304-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1051304-04 12/12/18 17:17 • (MS) R3368080-4 12/12/18 17:37 • (MSD) R3368080-5 12/12/18 17:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	1.25	ND	0.667	1.03	53.4	82.7	1	17.0-158		J3	43.2	27
Carbon tetrachloride	1.25	ND	0.688	1.35	55.1	108	1	23.0-159		J3	64.9	28
Chlorobenzene	1.25	ND	0.819	1.12	65.5	89.9	1	33.0-152		J3	31.4	27
Chloroform	1.25	ND	0.846	1.20	67.7	96.3	1	29.0-154		J3	34.9	28
1,2-Dichloroethane	1.25	ND	0.942	1.08	75.4	86.5	1	29.0-151			13.8	27
1,1-Dichloroethene	1.25	ND	0.511	1.02	40.9	81.9	1	11.0-160		J3	66.8	29
2-Butanone (MEK)	6.25	ND	4.66	5.11	74.5	81.7	1	10.0-160			9.25	32
Tetrachloroethene	1.25	ND	0.530	0.964	42.4	77.2	1	10.0-160		J3	58.1	27
Trichloroethene	1.25	ND	0.583	0.995	46.7	79.6	1	10.0-160		J3	52.1	25
Vinyl chloride	1.25	ND	0.480	0.912	38.4	72.9	1	10.0-160		J3	61.9	27
(S) Toluene-d8					*105*	*93.4*		*80.0-120*				
(S) Dibromofluoromethane					*118*	*119*		*75.0-120*				
(S) a,a,a-Trifluorotoluene					*108*	*103*		*80.0-120*				
(S) 4-Bromofluorobenzene					*104*	*98.4*		*77.0-126*				

Method Blank (MB)

(MB) R3367113-1 12/11/18 12:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
(S) Decachlorobiphenyl	*95.3*			*10.0-135*
(S) Tetrachloro-m-xylene	*85.3*			*10.0-139*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3367113-4 12/11/18 15:00 • (LCSD) R3367113-2 12/11/18 12:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
PCB 1260	0.167	0.242	0.190	145	114	37.0-145			24.1	37
PCB 1016	0.167	0.232	0.191	139	114	36.0-141			19.4	35
(S) Decachlorobiphenyl				*92.6*	*101*	*10.0-135*				
(S) Tetrachloro-m-xylene				*110*	*88.7*	*10.0-139*				

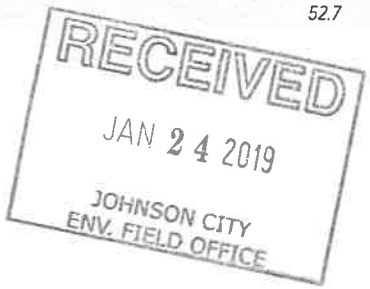
L1050069-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050069-01 12/12/18 12:59 • (MS) R3367459-1 12/12/18 11:32 • (MSD) R3367459-2 12/12/18 11:44

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
PCB 1260	0.214	U	0.0693	0.200	32.5	93.4	1	10.0-160		J3	96.9	38
PCB 1016	0.214	U	0.107	0.246	49.9	115	1	10.0-160		J3	79.0	37
(S) Decachlorobiphenyl					*40.2*	*108*		*10.0-135*				
(S) Tetrachloro-m-xylene					*52.7*	*114*		*10.0-139*				

Sample Narrative:

OS: Duplicate analysis was performed.



Method Blank (MB)

(MB) R3368148-2 12/14/18 00:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,4-Dichlorobenzene	U		0.0333	0.100
2,4-Dinitrotoluene	U		0.0333	0.100
Hexachlorobenzene	U		0.0333	0.100
Hexachloro-1,3-butadiene	U		0.0333	0.100
Hexachloroethane	U		0.0333	0.100
Nitrobenzene	U		0.0333	0.100
Pyridine	U		0.0333	0.100
2-Methylphenol	U		0.0333	0.100
3&4-Methyl Phenol	U		0.0333	0.100
Pentachlorophenol	U		0.0333	0.100
2,4,5-Trichlorophenol	U		0.0333	0.100
2,4,6-Trichlorophenol	U		0.0333	0.100
(S) Nitrobenzene-d5	*51.0*			*10.0-127*
(S) 2-Fluorobiphenyl	*65.4*			*10.0-130*
(S) p-Terphenyl-d14	*70.7*			*10.0-128*
(S) Phenol-d5	*21.7*			*10.0-120*
(S) 2-Fluorophenol	*40.9*			*10.0-120*
(S) 2,4,6-Tribromophenol	*61.5*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3368148-1 12/13/18 23:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,4-Dichlorobenzene	0.500	0.275	55.0	18.0-120	
2,4-Dinitrotoluene	0.500	0.383	76.6	49.0-124	
Hexachlorobenzene	0.500	0.388	77.6	44.0-120	
Hexachloro-1,3-butadiene	0.500	0.309	61.8	19.0-120	
Hexachloroethane	0.500	0.275	55.0	15.0-120	
Nitrobenzene	0.500	0.266	53.2	27.0-120	
Pyridine	0.500	0.245	49.0	10.0-120	
2-Methylphenol	0.500	0.283	56.6	28.0-120	
3&4-Methyl Phenol	0.500	0.309	61.8	31.0-120	
Pentachlorophenol	0.500	0.364	72.8	23.0-120	
2,4,5-Trichlorophenol	0.500	0.391	78.2	44.0-120	
2,4,6-Trichlorophenol	0.500	0.371	74.2	42.0-120	
(S) Nitrobenzene-d5			*49.6*	*10.0-127*	
(S) 2-Fluorobiphenyl			*62.7*	*10.0-130*	
(S) p-Terphenyl-d14			*69.0*	*10.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3368148-1 12/13/18 23:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) Phenol-d5			*22.5*	*10.0-120*	
(S) 2-Fluorophenol			*39.1*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*80.5*	*10.0-155*	

L1050973-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050973-02 12/14/18 00:28 • (MS) R3368148-3 12/14/18 00:52 • (MSD) R3368148-4 12/14/18 01:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,4-Dichlorobenzene	0.500	ND	0.148	0.204	29.6	40.8	1	17.0-120			31.8	40
2,4-Dinitrotoluene	0.500	ND	0.292	0.346	58.4	69.2	1	39.0-125			16.9	25
Hexachlorobenzene	0.500	ND	0.247	0.349	49.4	69.8	1	35.0-122		J3	34.2	24
Hexachloro-1,3-butadiene	0.500	ND	0.186	0.249	37.2	49.8	1	12.0-120			29.0	34
Hexachloroethane	0.500	ND	0.147	0.201	29.4	40.2	1	10.0-120			31.0	40
Nitrobenzene	0.500	ND	0.159	0.204	31.8	40.8	1	12.0-120			24.8	30
Pyridine	0.500	ND	0.114	0.128	22.8	25.6	1	10.0-120			11.6	37
2-Methylphenol	0.500	ND	0.186	0.220	37.2	44.0	1	10.0-120			16.7	30
3&4-Methyl Phenol	0.500	ND	0.208	0.237	41.6	47.4	1	10.0-120			13.0	36
Pentachlorophenol	0.500	ND	0.257	0.358	51.4	71.6	1	10.0-128			32.8	37
2,4,5-Trichlorophenol	0.500	ND	0.262	0.336	52.4	67.2	1	33.0-120			24.7	31
2,4,6-Trichlorophenol	0.500	ND	0.242	0.317	48.4	63.4	1	26.0-120			26.8	31
(S) Nitrobenzene-d5					*29.4*	*39.0*		*10.0-127*				
(S) 2-Fluorobiphenyl					*40.4*	*53.0*		*10.0-130*				
(S) p-Terphenyl-d14					*57.2*	*64.3*		*10.0-128*				
(S) Phenol-d5					*15.8*	*17.7*		*10.0-120*				
(S) 2-Fluorophenol					*26.0*	*30.6*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*46.9*	*70.0*		*10.0-155*				

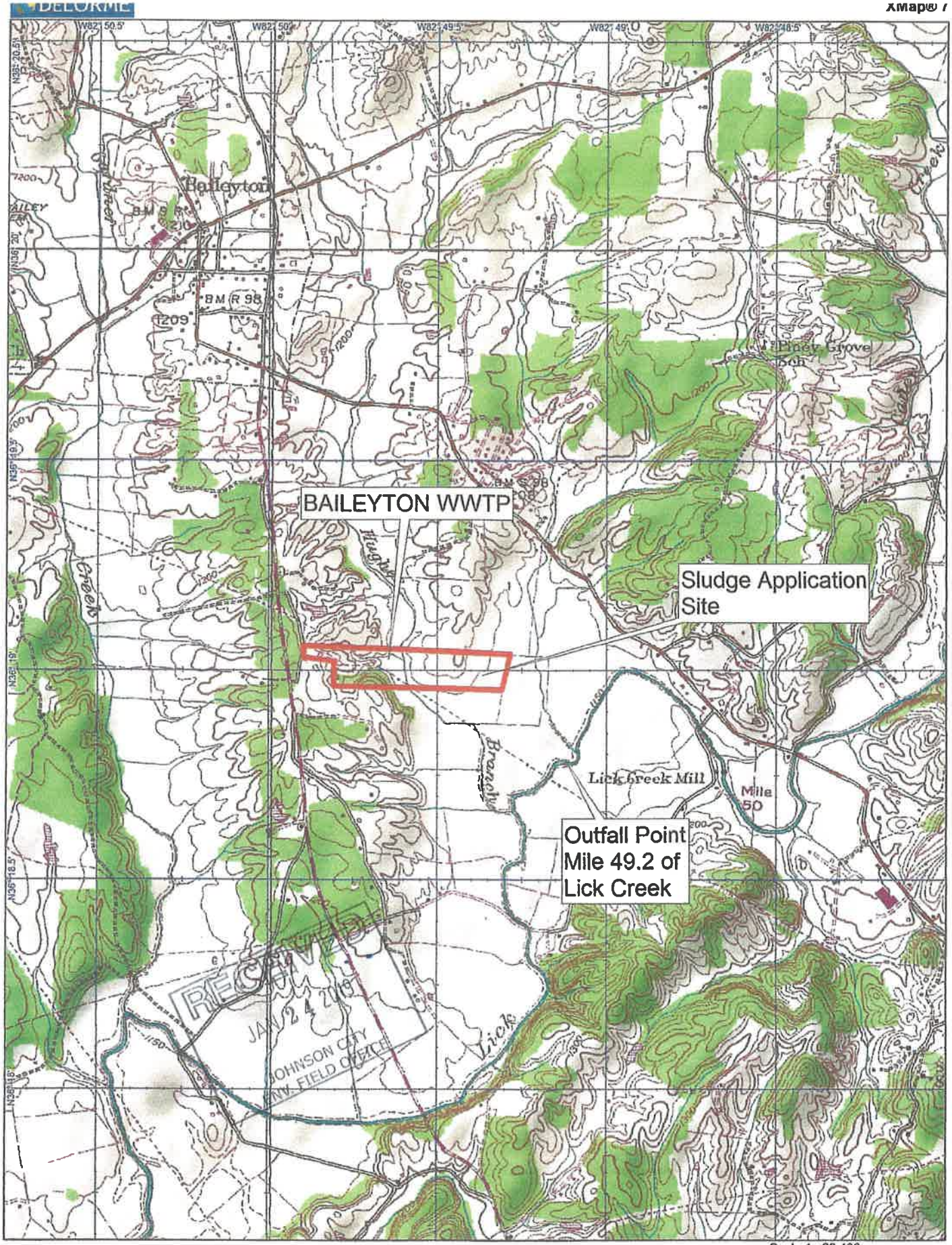
Guide to Reading and Understanding Your Laboratory Report

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.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
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.
U	Not detected at the Reporting Limit (or MDL where applicable).
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.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
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.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.



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1" = 1,866.7 ft

Data Zoom 13-2

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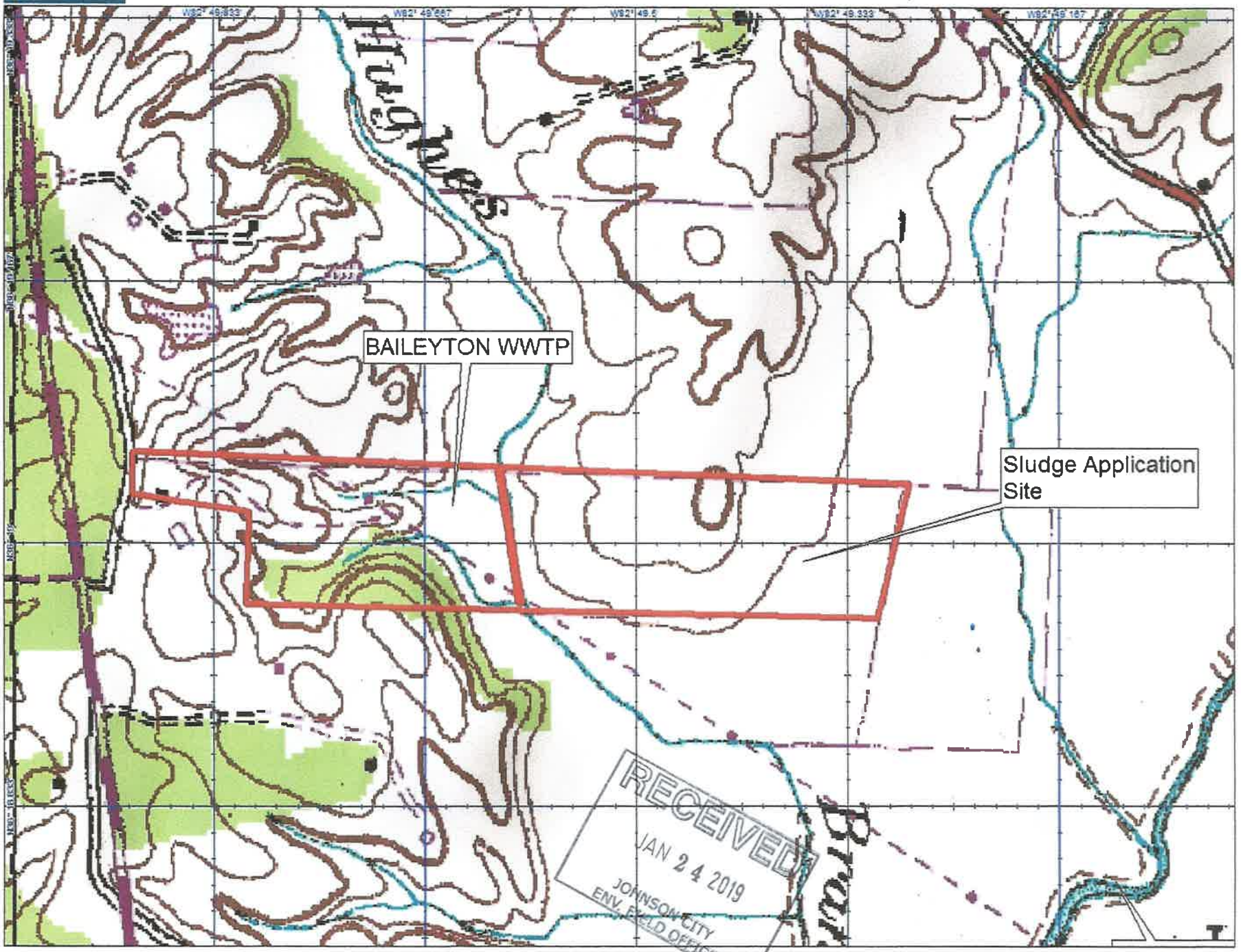

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Data Zoom 15-1