**Town of Baileyton W.W.T.P.**
**6530 Horton Highway**
**Greeneville, TN 37745**
**Phone #(423) 234-6911**
**Fax # (423) 234-5442**



January 2, 2024

To; Sandra K. Vance

The Town of Baileyton's sludge sampling schedule for the year 2024 is to collect digester sludge samples in April or May for all the parameters in our Bio Solids Permit. This is for the heavy metals as well as e-coli testing. I will also do a S.O.U.R. Test on the digested sludge. I will also do a S.O.U.R. Test on the digested sludge if we have to haul sludge in the summer and again in October or November when we empty our digesters for the winter months. We try to do the same thing every year.

If you have any further questions please feel free to contact at 423-234-0991.

Sincerely

Timothy A Gregg

**Town of Baileyton W.W.T.P.**
**6530 Horton Highway**
**Greeneville, TN 37745**
**Phone #(423) 234-6911**
**Fax # (423) 234-5442**



January 2, 2024

To; Whom it May Concern

I certify, under penalty of law that the Class B pathogen requirements in 503.32(b) and vector attraction requirements in 503.33(b)(1) or (b) (3) have been met. This determination has been under my supervision in accordance with the system design to insure that qualified personnel properly gather and evaluate the information used to determine that the pathogen and vector attraction requirements have been met. I am aware that there are significant penalties for the false certification including the possibility of fines and imprisonment.

W.W.T.P. Operator

Timothy A Bragg

I certify under penalty of law that the management practices in CFR 40 Section 503.14 have been met for the site on which the bulk sewage sludge is applied. This determination has been under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for the false certification including the possibility of fines and imprisonment.

W.W.T.P. Operator

Timothy A Bragg

Sludge

# ANALYTICAL REPORT

April 13, 2023

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

## Town of Baileyton WWTP



| | |
|---|---|
| Sample Delivery Group: | L1602352 |
| Samples Received: | 04/06/2023 |
| Project Number: | |
| Description: | |

Report To:

Mr. Danny Neely
6530 Horton Highway
Greeneville, TN 37745

Entire Report Reviewed By: Jennifer Huckaba

Jennifer Huckaba
Project Manager



# TABLE OF CONTENTS

# SAMPLE SUMMARY

## SLUDGE L1602352-01 Solid

Collected by: William A Dunbar
Collected date/time: 04/05/23 12:05
Received date/time: 04/06/23 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Total Solids by Method 2540 G-2011 | WG2039801 | 1 | 04/11/23 13:55 | 04/11/23 15:02 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 350.1 | WG2037221 | 1 | 04/08/23 23:05 | 04/11/23 11:58 | LDT | Mt. Juliet, TN |
| Wet Chemistry by Method 4500NOrg C-2011 | WG2037225 | 1 | 04/08/23 17:50 | 04/10/23 12:31 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2038504 | 1 | 04/08/23 21:54 | 04/09/23 10:09 | GEB | Mt. Juliet, TN |
| Mercury by Method 7471A | WG2037666 | 1 | 04/07/23 08:46 | 04/08/23 14:05 | LAS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG2037625 | 1 | 04/07/23 08:11 | 04/07/23 21:57 | ABL | Mt. Juliet, TN |

## SLUDGE L1602352-02 Solid

Collected by: William A Dunbar
Collected date/time: 04/05/23 12:05
Received date/time: 04/06/23 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Microbiology by Method EPA 1681 | WG2037088 | 1000 | 04/06/23 11:25 | 04/06/23 11:25 | BGE | Mt. Juliet, TN |

# CASE NARRATIVE

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.

Jennifer Huckaba

Jennifer Huckaba
Project Manager

## Project Narrative

Raw data for Fecal has been added behind the COC at the end of this report.

# SLUDGE

Collected date/time: 04/05/23 12:05

# SAMPLE RESULTS - 01

L1602352

## Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| | % | | | | |
| Total Solids | 1.09 | | 1 | 04/11/2023 15:02 | WG2039801 |

## 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 | 13.3 | 10.0 | 1220 | 917 | | 1 | 04/11/2023 11:58 | WG2037221 |

## 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 | 765 | 20.0 | 70200 | 1830 | | 1 | 04/10/2023 12:31 | WG2037225 |

## 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) | 34.3 | 10.0 | 3150 | 917 | | 1 | 04/09/2023 10:09 | WG2038504 |

## 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 | 0.0400 | ND | 3.67 | | 1 | 04/08/2023 14:05 | WG2037666 |

## 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 | 0.200 | ND | 18.3 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Cadmium | ND | 0.0500 | ND | 4.59 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Copper | 1.53 | 0.200 | 140 | 18.3 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Lead | ND | 0.0500 | ND | 4.59 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Molybdenum | 0.0576 | 0.0500 | 5.29 | 4.59 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Nickel | ND | 0.200 | ND | 18.3 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Selenium | ND | 0.200 | ND | 18.3 | | .1 | 04/07/2023 21:57 | WG2037625 |
| Zinc | 10.0 | 0.500 | 922 | 45.9 | | .1 | 04/07/2023 21:57 | WG2037625 |

# SLUDGE

Collected date/time: 04/05/23 12:05

# SAMPLE RESULTS - 02

L1602352

## Microbiology by Method EPA 1681

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| | MPN/g | | | | |
| Fecal Coliform -Geom.Mean | <21000 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -1 | <20300 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -2 | <20600 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -3 | <20900 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -4 | <20700 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -5 | <20800 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -6 | <20600 | | 1000 | 04/06/2023 11:25 | WG2037088 |
| Fecal Coliform -7 | 22700 | | 1000 | 04/06/2023 11:25 | WG2037088 |

# QUALITY CONTROL SUMMARY

L1602352-01

## ıod Blank (MB)

R3912268-1 04/11/23 15:02

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | % | | % | % |
| olids | 0.000 | | | |

## )2352-01 Original Sample (OS) • Duplicate (DUP)

L1602352-01 04/11/23 15:02 • (DUP) R3912268-3 04/11/23 15:02

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | % | % | | % | | % |
| olids | 1.09 | 1.10 | 1 | 0.913 | | 10 |

## ɔratory Control Sample (LCS)

R3912268-2 04/11/23 15:02

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | % | % | % | % | |
| olids | 50.0 | 50.0 | 100 | 85.0-115 | |

### hod Blank (MB)

R3911773-1 04/11/23 11:53

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | mg/kg | | mg/kg | mg/kg |
| nia Nitrogen | U | | 7.00 | 10.0 |

### 02604-29 Original Sample (OS) • Duplicate (DUP)

L1602604-29 04/11/23 13:10 • (DUP) R3911773-15 04/11/23 13:11

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | | | | % | | % |
| nia Nitrogen | ND | ND | 1 | 0.000 | | 20 |

### 02604-25 Original Sample (OS) • Duplicate (DUP)

L1602604-25 04/11/23 14:20 • (DUP) R3911773-18 04/11/23 14:21

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | | | | % | | % |
| nia Nitrogen | 154 | 152 | 1 | 0.910 | | 20 |

### oratory Control Sample (LCS)

R3911773-2 04/11/23 11:54

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | mg/kg | mg/kg | % | % | |
| nia Nitrogen | 500 | 500 | 100 | 90.0-110 | |

### 02612-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1602612-03 04/11/23 13:16 • (MS) R3911773-16 04/11/23 13:18 • (MSD) R3911773-17 04/11/23 13:19

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| nia Nitrogen | 644 | ND | 638 | 638 | 99.0 | 99.0 | 1 | 80.0-120 | | | 0.00961 | 20 |

Chemistry by Method 350.1

## 02604-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

1602604-25 04/11/23 14:20 • (MS) R3911773-19 04/11/23 14:23 • (MSD) R3911773-20 04/11/23 14:24

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | | | | % | % | | % | | | % | % |
| nia Nitrogen | 597 | 154 | 709 | 689 | 93.1 | 89.8 | 1 | 80.0-120 | | | 2.85 | 20 |

## hod Blank (MB)

R3911293-1 04/10/23 11:05

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | mg/kg | | mg/kg | mg/kg |
| n Nitrogen, TKN | U | | 4.48 | 20.0 |

## 2604-07 Original Sample (OS) • Duplicate (DUP)

1602604-07 04/10/23 12:36 • (DUP) R3911293-12 04/10/23 12:38

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | | | | % | | % |
| n Nitrogen, TKN | 498 | 535 | 1 | 7.28 | | 20 |

## 2604-13 Original Sample (OS) • Duplicate (DUP)

1602604-13 04/10/23 12:44 • (DUP) R3911293-13 04/10/23 12:45

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | | | | % | | % |
| n Nitrogen, TKN | 3860 | 4160 | 5 | 7.46 | | 20 |

## oratory Control Sample (LCS)

R3911293-2 04/10/23 11:06

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | mg/kg | mg/kg | % | % | |
| n Nitrogen, TKN | 588 | 592 | 101 | 75.2-121 | |

## 2604-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

1602604-27 04/10/23 12:54 • (MS) R3911293-10 04/10/23 11:40 • (MSD) R3911293-11 04/10/23 11:42

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | | | | % | % | | % | | | % | % |
| n Nitrogen, TKN | 467 | 457 | 828 | 870 | 79.4 | 88.5 | 1 | 90.0-110 | J6 | J6 | 4.99 | 20 |

e Narrative:
Matrix spike failure due to matrix.
): Matrix spike failure due to matrix.

# QUALITY CONTROL SUMMARY

L1602352-01

## )2604-25 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

1602604-25 04/10/23 12:50 • (MS) R3911293-14 04/10/23 12:52 • (MSD) R3911293-15 04/10/23 12:53

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | | | | % | % | | % | | | % | % |
| ıl Nitrogen, TKN | 477 | 1710 | 2010 | 2030 | 64.3 | 68.3 | 2 | 90.0-110 | E J6 | E J6 | 0.943 | 20 |

e Narrative:

Matrix spike failure due to matrix.

): Matrix spike failure due to matrix.

### ıod Blank (MB)

R3911251-1 04/09/23 05:06

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | mg/kg | | mg/kg | mg/kg |
| | U | | 0.557 | 10.0 |

### )2352-01 Original Sample (OS) • Duplicate (DUP)

.1602352-01 04/09/23 10:09 • (DUP) R3911251-3 04/09/23 10:25

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | mg/kg | mg/kg | | % | | % |
| | 3150 | 3220 | 1 | 2.13 | | 15 |

### )2604-09 Original Sample (OS) • Duplicate (DUP)

.1602604-09 04/09/23 13:04 • (DUP) R3911251-6 04/09/23 13:20

| | Original Result (dry) | DUP Result (dry) | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| e | | | | % | | % |
| | ND | ND | 1 | 19.4 | P1 | 15 |

### ɔratory Control Sample (LCS)

R3911251-2 04/09/23 05:22

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | mg/kg | mg/kg | % | % | |
| | 20.0 | 19.3 | 96.7 | 80.0-120 | |

### )2352-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

.1602352-01 04/09/23 10:09 • (MS) R3911251-4 04/09/23 10:41 • (MSD) R3911251-5 04/09/23 11:29

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| | 4590 | 3150 | 8420 | 8360 | 115 | 114 | 1 | 80.0-120 | | | 0.674 | 15 |

## nod Blank (MB)

R3910994-1 04/08/23 13:23

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | mg/kg | | mg/kg | mg/kg |
| y | U | | 0.0180 | 0.0400 |

## oratory Control Sample (LCS)

R3910994-2 04/08/23 13:25

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | mg/kg | mg/kg | % | % | |
| y | 0.500 | 0.518 | 104 | 80.0-120 | |

## 02612-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1602612-03 04/08/23 13:32 • (MS) R3910994-3 04/08/23 13:35 • (MSD) R3910994-4 04/08/23 13:38

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | | | | % | % | | % | | | % | % |
| y | 0.644 | ND | 0.648 | 0.834 | 95.0 | 124 | 1 | 75.0-125 | | J3 | 25.2 | 20 |

# QUALITY CONTROL SUMMARY

L1602352-01

## hod Blank (MB)

R3911147-1 04/07/23 21:00

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| e | mg/kg | | mg/kg | mg/kg |
| : | U | | 0.518 | 2.00 |
| um | U | | 0.0471 | 0.500 |
| r | U | | 0.400 | 2.00 |
| | U | | 0.208 | 0.500 |
| denum | U | | 0.109 | 0.500 |
| | U | | 0.132 | 2.00 |
| um | U | | 0.764 | 2.00 |
| | U | | 0.832 | 5.00 |

## oratory Control Sample (LCS)

R3911147-2 04/07/23 21:02

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| e | mg/kg | mg/kg | % | % | |
| : | 100 | 87.5 | 87.5 | 80.0-120 | |
| um | 100 | 91.4 | 91.4 | 80.0-120 | |
| r | 100 | 90.0 | 90.0 | 80.0-120 | |
| | 100 | 92.2 | 92.2 | 80.0-120 | |
| denum | 100 | 95.7 | 95.7 | 80.0-120 | |
| | 100 | 91.7 | 91.7 | 80.0-120 | |
| um | 100 | 89.2 | 89.2 | 80.0-120 | |
| | 100 | 91.5 | 91.5 | 80.0-120 | |

## )2293-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

1602293-01 04/07/23 21:05 • (MS) R3911147-5 04/07/23 21:13 • (MSD) R3911147-6 04/07/23 21:16

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| : | 126 | 7.61 | 117 | 126 | 87.0 | 94.5 | 1 | 75.0-125 | | | 7.72 | 20 |
| um | 126 | ND | 118 | 129 | 93.6 | 103 | 1 | 75.0-125 | | | 9.29 | 20 |
| r | 126 | 24.4 | 159 | 173 | 107 | 118 | 1 | 75.0-125 | | | 8.47 | 20 |
| | 126 | 124 | 362 | 372 | 190 | 197 | 1 | 75.0-125 | J5 | J5 | 2.53 | 20 |
| denum | 126 | 2.28 | 120 | 130 | 93.4 | 102 | 1 | 75.0-125 | | | 8.29 | 20 |
| | 126 | 57.7 | 149 | 162 | 73.0 | 83.0 | 1 | 75.0-125 | J6 | | 8.12 | 20 |
| um | 126 | ND | 109 | 120 | 86.4 | 95.3 | 1 | 75.0-125 | | | 9.85 | 20 |
| | 126 | 234 | 429 | 401 | 155 | 133 | 1 | 75.0-125 | J5 | J5 | 6.69 | 20 |

# GLOSSARY OF TERMS

## 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

| | |
|---|---|
| (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. |
| 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 |
|---|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| 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

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | TN00003 |
| 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 | LA000356 |
| Kentucky [1 6] | KY90010 | South Carolina | 84004002 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| 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

* 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 Analytical.

Company Name/Address:
**Town of Baileyton WWTP**

530 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;sandra.vance@tn.

Project Description:

City/State Collected:

Please Circle: PT MT CT (ET)

Phone: 423-620-8208

Client Project #

Lab Project #
BAILEY02-SLUDGE

Collected by (print): William A Dunbar

Collected by (signature): William A Dunbar

Site/Facility ID #

P.O. #

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 | Remarks | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UDGE | GRAB | SS | | 4-5-23 | 1205 | 3 | | X | X | X | | -01 |
| UDGE | GRAB | SS | | 4-5-23 | 1205 | 9 | X | | | | | -02 |

Matrix:
S - 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 #

Relinquished by : (Signature) William A Dunbar — Date: 4-5-23 — Time: 12:10

Received by: (Signature) T. Kelly

Relinquished by: (Signature) T. Kelly — Date: 4-5-23 — Time: 1700

Received by: (Signature) CROSSTOWN

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

Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 1.3+0.7=2.0 °C Bottles Received: 12

Date: 4/6/23 Time: 0600

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

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1602352

Table #

Acctnum: BAILEY02

Template: T111405

Prelogin: P977972

PM: 3513 - Jennifer Huckaba

PB: 04/3/23

Shipped Via: FedEX Ground

CLIENT: Baileytown ESC L# **1602352-02**

DATE ON: **4/6/2023** DATE OFF: **4/7/2023**

Data entered into excel spreadsheet by: **ML 607**

| Plate | ml filtered |
|---|---|
| A | 0.001 |
| B | 0.0001 |
| C | 0.00001 |
| D | 0.000001 |

<—Largest Volumn Tested

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

**sample type:** Liquid

MPN/mL 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 | 20305.35 | 4.307610505 |
| 2 | 0 | 0 | 0 | < 0.1803 | 0.001 | 20564.95 | 4.313127702 |
| 3 | 0 | 0 | 0 | < 0.1803 | 0.001 | 20875.66 | 4.319640312 |
| 4 | 0 | 0 | 0 | < 0.1803 | 0.001 | 20708.42 | 4.316146907 |
| 5 | 0 | 0 | 0 | < 0.1803 | 0.001 | 20821.43 | 4.318510643 |
| 6 | 0 | 0 | 0 | < 0.1803 | 0.001 | 20574.09 | 4.313320674 |
| 7 | 1 | 0 | 0 | 0.2 | 0.001 | 22674.98 | 4.355546865 |

4.320557658

**GEO MEAN** **< 20919.81**

**[FCMPN/g]=** $\frac{\text{(MPN/1mL) from Table 4}}{\text{(Largest Vol tested) X (\% total solids-expressed as a decimal)}}$

**% Total Solids = (expressed as a decimal)** $\frac{\text{Dry wt - Initial wt}}{\text{Wet wt - Initial wt}}$

| | Percent Solids | | | |
|---|---|---|---|---|
| Sample # | Initial Weight of Boat | Wet Weight | Dry weight | % Total Solids expressed as a decimal |
| 1 | 1.29621 | 8.6424 | 1.36144 | 0.00888 |
| 2 | 1.294 | 8.65769 | 1.35856 | 0.00877 |
| 3 | 1.29837 | 8.67027 | 1.36204 | 0.00864 |
| 4 | 1.29576 | 8.65569 | 1.35984 | 0.00871 |
| 5 | 1.30006 | 8.87569 | 1.36566 | 0.00866 |
| 6 | 1.29627 | 8.56738 | 1.35999 | 0.00876 |
| 7 | 1.29371 | 8.86035 | 1.36045 | 0.00882 |

## Class B Fecal Coliform Analysis by MPN- EPA 1681

[Liquid or Solid]

Client Name: Doylestown

ESC Sample #: L1602352-02

Final pH must be between 7.0-7.5 and must not use more than 15mL of (HCl or NaOH) per 300mL

| | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x (10mL per tube of 10,000mL) | 10,000x (1mL per tube of 100,000mL) | 100,000x (.1mL per tube of 1,000,000mL) | 1,000,000x (.01mL per tube of 10,000,000mL) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Date/Time: 4-6-23 @ 1125 | Date/Time: 4-7-23 @ 1410 | Date/Time: 4-7-23 @ 0952 | 0 | 0 | 0 | 0 | Initial pH | 6.8 | .2mL NaOH (1N) |
| | Temp: 35 | Temp: 44.5 | Temp: 44.5 | 0 | 0 | 0 | 0 | Final pH | 7.2 | .15mL HCl (1N) |
| | Analyst: BE/ML | Analyst: BE | Analyst: BE | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | SAMPLE COLLECTION: 4-5-23 @ 1205 | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | | | | | | | MPN Result | < 20,300 | |
| 2 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.9 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.2 | |
| | Temp: | Temp: | Temp: | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | MPN Result | < 20,600 | |
| 3 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.8 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.2 | |
| | Temp: | Temp: | Temp: | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | MPN Result | < 20,900 | |
| 4 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.8 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.2 | |
| | Temp: | Temp: | Temp: | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | MPN Result | < 20,700 | |
| 5 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.8 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.3 | |
| | Temp: | Temp: | Temp: | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | MPN Result | < 20,800 | |
| 6 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.9 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.2 | |
| | Temp: | Temp: | Temp: | 0 | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 0-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | < .1803 | 0 | 0 | 0 | 0 | MPN Result | < 20,600 | |
| 7 | Set up 35 deg | Move to 44.5 deg | Test end info | 1,000x | 10,000x | 100,000x | 1,000,000x | Initial pH | 6.8 | .05mL NaOH (1N) |
| | Date/Time: | Date/Time: | Date/Time: | 0 | 0 | 0 | 0 | Final pH | 7.3 | |
| | Temp: | Temp: | Temp: | X | 0 | 0 | 0 | Method Blank | 0/0 | |
| | Analyst: | Analyst: | Analyst: | 0 | 0 | 0 | 0 | Negative Con | 0 | |
| | SAMPLE COLLECTION: | Combination of Positive: | 1-0-0 @ .001 | 0 | 0 | 0 | 0 | Positive Con | X | |
| | | MPN/mL from table: | 0.2 | 0 | 0 | 0 | 0 | MPN Result | 22,700 | |

X denotes Positive tube

0 denotes Negative tube

**Total Solids Analysis** (30g +/-.1g)

| Sample | Dish Label | Initial wt (g) | Wet wt (g) | Dry wt (g) | %Tot Solids | Amt used (g) |
|---|---|---|---|---|---|---|
| Sample #1 | B1 | 1.29621 | 8.64240 | 1.36144 | .01 | NA |
| Sample #2 | B2 | 1.29400 | 8.65769 | 1.35856 | .01 | |
| Sample #3 | B3 | 1.29837 | 8.67027 | 1.36204 | .01 | |
| Sample #4 | B4 | 1.29576 | 8.65569 | 1.35984 | .01 | |
| Sample #5 | B5 | 1.30006 | 8.87569 | 1.36566 | .01 | |
| Sample #6 | B6 | 1.29627 | 8.56738 | 1.35999 | .01 | |
| Sample #7 | B7 | 1.29371 | 8.86035 | 1.36045 | .01 | |

| Media/Reagents Lot # | Lot: | Exp date |
|---|---|---|
| A1 medium Lot #: | 52454 | 10-31-23 |
| Phosphate Buffer: | 22K3098 | 5-31-24 |
| NaOH Lot: 1N | NA | |
| HCl Lot: 1N | 49139 | 10-20-23 |
| Positive Control: E. coli | 040523 | 4-6-23 |
| Negative Control: K.aerogenes | 022723 | 5-27-23 |
| ^(only need for OPR or MS) | | |
| ^TSA Slant Lot #: | NA | NA |
| ^1% LTB Lot #: | | |

22L1446 Exp 10-19-24

**Town of Baileyton** **Year 2023**

**W.W.T.P.**

**Annual Sludge Report**

| | Tons of Sluge Hauled | S.O.U.R. Test mg/l |
|---|---|---|
| **January** | | |
| **February** | | |
| **March** | | |
| **April** | | |
| **May** | | |
| **June** | 0.94 | 0.08 |
| **July** | | |
| **August** | | |
| **September** | 0.13 | |
| **October** | | |
| **November** | 0.29 | |
| **December** | 0.95 | |
| **Total** | 2.31 | 0.08 |
| **Avg** | 0.58 | 0.08 |