

11/5/2019

State of Tennessee, Department of Correction
Ms. Greta Reed
Attn: Waste Water Treatment Plant²1045 Horsehead R
1045 Horsehead Rd
Pikeville, TN, 37367

Ref: Analytical Testing
Lab Report Number: 19-302-0061
Client Project Description: State of TN, Dept of Corrections WWTP
TCLP/PCB Samples

Dear Ms. Greta Reed:

Waypoint Analytical, LLC. received sample(s) on 10/29/2019 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method. Where the laboratory was not responsible for the sampling stage (refer to the chain of custody) results apply to the sample as received.

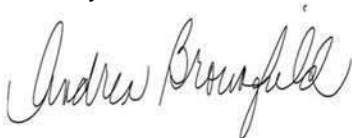
The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule August 2017) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,



Andrea R Brownfield
Project manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Alabama #40750	Louisiana #04015	VA NELAP #460181	Texas #T104704180	Arkansas #88-0650
Mississippi	California #2904	NC #415	Oklahoma #9311	SC #84002
Kentucky #90047	Tennessee #TN02027	EPA #TN00012	Kentucky UST #80215	PA DEP #68-03195





Sample Summary Table

Report Number: 19-302-0061
Client Project Description: State of TN, Dept of Corrections WWTP
TCLP/PCB Samples

Lab No	Client Sample ID	Matrix	Date Collected	Date Received
86954	Biosolids	TCLP	10/28/2019 10:15	10/29/2019

07624

State of Tennessee, Department of Correction

Ms. Greta Reed

Attn: Waste Water Treatment Plant²1045 Horsel

1045 Horsehead Rd

Pikeville , TN 37367

Project State of TN, Dept of Corrections WWTP

Information : TCLP/PCB Samples

Report Date : 11/05/2019

Received : 10/29/2019



Andrea R. Brownfield
Project manager

Report Number : **19-302-0061**

REPORT OF ANALYSIS

Lab No : **86954**

Sample ID : **Biosolids**

Matrix: **TCLP**

Sampled: **10/28/2019 10:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
TCLP Metals Extraction	Leachate			1	10/30/19 14:19	SAJ	1311
TCLP SVOC Extraction	Leachate			1	10/30/19 14:19	SAJ	1311
TCLP VOC ZHE Extraction	Leachate			1	10/30/19 14:05	SAJ	SW-1311 (ZHE)
TCLP Pesticide Extraction	Leachate			1	10/30/19 14:19	SAJ	1311
TCLP Herbicide Extraction	Leachate			1	10/30/19 14:19	SAJ	1311

Analytical Method: 6010D

Prep Batch(es): L461906 11/01/19 08:00

Prep Method: 3005A

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Arsenic	<0.025	mg/L	0.025	1	11/04/19 20:52	KKM	L462597
TCLP Barium	0.075	mg/L	0.025	1	11/04/19 20:52	KKM	L462597
TCLP Cadmium	<0.0050	mg/L	0.0050	1	11/04/19 20:52	KKM	L462597
TCLP Chromium	<0.010	mg/L	0.010	1	11/04/19 20:52	KKM	L462597
TCLP Lead	<0.010	mg/L	0.010	1	11/04/19 20:52	KKM	L462597
TCLP Selenium	<0.050	mg/L	0.050	1	11/04/19 20:52	KKM	L462597
TCLP Silver	<0.005	mg/L	0.005	1	11/04/19 20:52	KKM	L462597

**Qualifiers/
Definitions**

DF Dilution Factor
Q RPD >40% dual column results
MQL Method Quantitation Limit

07624

State of Tennessee, Department of Correction

Ms. Greta Reed

Attn: Waste Water Treatment Plant²1045 Horsel

1045 Horsehead Rd

Pikeville, TN 37367

Project State of TN, Dept of Corrections WWTP

Information : TCLP/PCB Samples

Report Date : 11/05/2019

Received : 10/29/2019



Andrea R. Brownfield
Project manager

Report Number : **19-302-0061**

REPORT OF ANALYSIS

Lab No : **86954**

Sample ID : **Biosolids**

Matrix: **TCLP**

Sampled: **10/28/2019 10:15**

Analytical Method: 7470A **Prep Batch(es):** L461899 10/31/19 09:00

Prep Method: 7470A

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Mercury	<0.0200	mg/L	0.0200	1	10/31/19 14:18	TJS	L461999

Analytical Method: 8081A **Prep Batch(es):** L462408 11/04/19 12:30

Prep Method: 3510C

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Chlordane	<0.008000	mg/L	0.008000	10	11/05/19 00:49	VIC	L462604
TCLP Endrin	<0.001600	mg/L	0.001600	10	11/05/19 00:49	VIC	L462604
TCLP gamma-BHC	<0.001600	mg/L	0.001600	10	11/05/19 00:49	VIC	L462604
TCLP Heptachlor	<0.001600	mg/L	0.001600	10	11/05/19 00:49	VIC	L462604
TCLP Heptachlor Epoxide	<0.001600	mg/L	0.001600	10	11/05/19 00:49	VIC	L462604
TCLP Methoxychlor	<0.001600	mg/L	0.001600	10	11/05/19 00:49	VIC	L462604
TCLP Toxaphene	<0.01200	mg/L	0.01200	10	11/05/19 00:49	VIC	L462604
Surrogate: Decachlorobiphenyl	53.13		Limits: 36-116%	10	11/05/19 00:49	VIC	L462604
Surrogate: Tetrachloro-m-xylene	58.46		Limits: 25-123%	10	11/05/19 00:49	VIC	L462604

Analytical Method: 8151A **Prep Batch(es):** L462496 11/04/19 17:25

Prep Method: 8151A

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP 2,4-D	<0.0200	mg/L	0.0200	1	11/05/19 14:10	VIC	L462704
TCLP 2,4,5-TP (Silvex)	<0.0020	mg/L	0.0020	1	11/05/19 14:10	VIC	L462704
Surrogate: DCAA	98.60		Limits: 20-120%	1	11/05/19 14:10	VIC	L462704

Qualifiers/Definitions DF Dilution Factor MQL Method Quantitation Limit
Q RPD >40% dual column results

07624

State of Tennessee, Department of Correction

Ms. Greta Reed

Attn: Waste Water Treatment Plant²1045 Horsel

1045 Horsehead Rd

Pikeville, TN 37367

Project State of TN, Dept of Corrections WWTP

Information : TCLP/PCB Samples

Report Date : 11/05/2019

Received : 10/29/2019



Andrea R. Brownfield
Project manager

Report Number : **19-302-0061**

REPORT OF ANALYSIS

Lab No : **86954**

Matrix: **TCLP**

Sample ID : **Biosolids**

Sampled: **10/28/2019 10:15**

Analytical Method: 8260B **Prep Batch(es):** **L462350** 11/01/19 08:56

Prep Method: 5030B

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Benzene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Carbon Tetrachloride	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Chlorobenzene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Chloroform	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP 1,4-Dichlorobenzene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP 1,2-Dichloroethane	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP 1,1-Dichloroethene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Methyl Ethyl Ketone (MEK)	<0.200	mg/L	0.200	1	11/01/19 12:57	RED	L462353
TCLP Tetrachloroethene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Trichloroethene	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
TCLP Vinyl Chloride	<0.0100	mg/L	0.0100	1	11/01/19 12:57	RED	L462353
Surrogate: 4-Bromofluorobenzene	130		Limits: 71-137%	1	11/01/19 12:57	RED	L462353
Surrogate: Dibromofluoromethane	120		Limits: 70-128%	1	11/01/19 12:57	RED	L462353
Surrogate: 1,2-Dichloroethane - d4	121		Limits: 63-136%	1	11/01/19 12:57	RED	L462353
Surrogate: Toluene-d8	130		Limits: 70-130%	1	11/01/19 12:57	RED	L462353

Analytical Method: 8270D **Prep Batch(es):** **L462333** 11/04/19 10:30

Prep Method: 3510C

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP 2-Methylphenol	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP 3&4 Methylphenol	<0.040	mg/L	0.040	1	11/04/19 21:48	BGV	L462614
TCLP 2,4-Dinitrotoluene	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614

Qualifiers/Definitions DF Dilution Factor MQL Method Quantitation Limit
Q RPD >40% dual column results

07624

State of Tennessee, Department of Correction

Ms. Greta Reed

Attn: Waste Water Treatment Plant²1045 Horsel

1045 Horsehead Rd

Pikeville , TN 37367

Project State of TN, Dept of Corrections WWTP

Information : TCLP/PCB Samples

Report Date : 11/05/2019

Received : 10/29/2019



Andrea R. Brownfield
Project manager

Report Number : **19-302-0061**

REPORT OF ANALYSIS

Lab No : **86954**

Sample ID : **Biosolids**

Matrix: **TCLP**

Sampled: **10/28/2019 10:15**

Analytical Method: 8270D **Prep Batch(es):** L462333 11/04/19 10:30

Prep Method: 3510C

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Batch
TCLP Hexachlorobenzene	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP Hexachlorobutadiene	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP Hexachloroethane	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP Nitrobenzene	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP Pentachlorophenol	<0.040	mg/L	0.040	1	11/04/19 21:48	BGV	L462614
TCLP Pyridine	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP 2,4,5-Trichlorophenol	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
TCLP 2,4,6-Trichlorophenol	<0.020	mg/L	0.020	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP 2,4,6-Tribromophenol	68.0		Limits: 42-102%	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP 2-Fluorobiphenyl	44.0		Limits: 24-86%	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP 2-Fluorophenol	21.8		Limits: 13-37%	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP 4-Terphenyl-d14	67.3		Limits: 30-122%	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP Nitrobenzene-d5	46.5		Limits: 25-78%	1	11/04/19 21:48	BGV	L462614
Surrogate: TCLP Phenol-d6	16.3		Limits: 9-27%	1	11/04/19 21:48	BGV	L462614

**Qualifiers/
Definitions**

DF Dilution Factor
Q RPD >40% dual column results

MQL Method Quantitation Limit

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L461906 **QC Analytical Batch(es):** L462597
QC Prep Batch Method: 3005A **Analysis Method:** 6010D
Analysis Description: Metals Analysis (TCLP)

Lab Reagent Blank LRB-L461906 Matrix: TCL
Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed
TCLP Arsenic	mg/L	< 0.025	0.025	11/04/19 20:20
TCLP Barium	mg/L	< 0.025	0.025	11/04/19 20:20
TCLP Cadmium	mg/L	< 0.0050	0.0050	11/04/19 20:20
TCLP Chromium	mg/L	< 0.010	0.010	11/04/19 20:20
TCLP Lead	mg/L	< 0.010	0.010	11/04/19 20:20
TCLP Selenium	mg/L	< 0.050	0.050	11/04/19 20:20
TCLP Silver	mg/L	< 0.005	0.005	11/04/19 20:20

Laboratory Control Sample LCS-L461906

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
TCLP Arsenic	mg/L	0.100	0.104	104	80-120
TCLP Barium	mg/L	1.00	1.04	104	80-120
TCLP Cadmium	mg/L	0.100	0.105	105	80-120
TCLP Chromium	mg/L	1.00	1.03	103	80-120
TCLP Lead	mg/L	0.100	0.103	103	80-120
TCLP Selenium	mg/L	0.100	0.101	101	80-120
TCLP Silver	mg/L	0.100	0.099	99.0	80-120

Matrix Spike & Matrix Spike Duplicate G 63519-MS-L461906 G 63519-MSD-L461906

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
TCLP Arsenic	mg/L	< 0.025	0.500	0.500	0.510	0.516	102	103	75-125	1.1	20.0
TCLP Barium	mg/L	< 0.025	5.00	5.00	4.91	4.97	98.2	99.4	75-125	1.2	20.0
TCLP Cadmium	mg/L	< 0.0050	0.500	0.500	0.502	0.508	100	102	75-125	1.1	20.0
TCLP Chromium	mg/L	< 0.010	5.00	5.00	4.92	4.94	98.4	98.8	75-125	0.4	20.0

Quality Control Data

Client ID: State of Tennessee, Department of Correction

Project Description: State of TN, Dept of Corrections WWTP

Report No: 19-302-0061

QC Prep: L461906

QC Analytical Batch(es): L462597

QC Prep Batch Method: 3005A

Analysis Method: 6010D

Analysis Description: Metals Analysis (TCLP)

Matrix Spike & Matrix Spike Duplicate G 63519-MS-L461906 G 63519-MSD-L461906

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
TCLP Lead	mg/L	< 0.010	0.500	0.500	0.483	0.487	96.6	97.4	75-125	0.8	20.0
TCLP Selenium	mg/L	< 0.050	0.500	0.500	0.510	0.521	102	104	75-125	2.1	20.0
TCLP Silver	mg/L	< 0.005	0.500	0.500	0.507	0.511	101	102	75-125	0.7	20.0

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L461899 **QC Analytical Batch(es):** L461999
QC Prep Batch Method: 7470A **Analysis Method:** 7470A
Analysis Description: Total Aqueous Mercury Analysis - CVAA (TCLP)

Lab Reagent Blank LRB-L461899 Matrix: TCL
Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed
TCLP Mercury	mg/L	< 0.0010	0.0010	10/31/19 13:34

Laboratory Control Sample LCS-L461899

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
TCLP Mercury	mg/L	0.0040	0.0034	85.0	80-120

Matrix Spike & Matrix Spike Duplicate G 63519-MS-L461899 G 63519-MSD-L461899

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
TCLP Mercury	mg/L	< 0.0200	0.0800	0.0800	0.0742	0.0746	92.7	93.2	80-120	0.5	20.0

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462408 **QC Analytical Batch(es):** L462604
QC Prep Batch Method: 3510C **Analysis Method:** 8081A
Analysis Description: Organochlorine Pesticides by GC (TCLP)

Lab Reagent Blank LRB-L462408 Matrix: TCL
 Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed	% Recovery	% Rec Limits
TCLP Chlordane	mg/L	< 0.008000	0.008000	11/04/19 23:49		
TCLP Endrin	mg/L	< 0.001600	0.001600	11/04/19 23:49		
TCLP gamma-BHC	mg/L	< 0.001600	0.001600	11/04/19 23:49		
TCLP Heptachlor	mg/L	< 0.001600	0.001600	11/04/19 23:49		
TCLP Heptachlor Epoxide	mg/L	< 0.001600	0.001600	11/04/19 23:49		
TCLP Methoxychlor	mg/L	< 0.001600	0.001600	11/04/19 23:49		
TCLP Toxaphene	mg/L	< 0.01200	0.01200	11/04/19 23:49		
Decachlorobiphenyl (S)				11/04/19 23:49	67.9	36-116
Tetrachloro-m-xylene (S)				11/04/19 23:49	76.4	25-123

Laboratory Control Sample & LCSD LCS-L462408 LCSD-L462408

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
TCLP Endrin	mg/L	0.008000	0.004680	0.005182	58.5	64.7	45-117	10.1	20.00
TCLP gamma-BHC	mg/L	0.008000	0.007170	0.007059	89.6	88.2	41-102	1.5	20.00
TCLP Heptachlor	mg/L	0.008000	0.006899	0.006474	86.2	80.9	40-110	6.3	20.00
TCLP Heptachlor Epoxide	mg/L	0.008000	0.007429	0.006839	92.8	85.4	42-115	8.2	20.00
TCLP Methoxychlor	mg/L	0.008000	0.004392	0.004418	54.9	55.2	39-140	0.5	20.00
Decachlorobiphenyl (S)					75.5	68.4	36-116		
Tetrachloro-m-xylene (S)					79.0	73.0	25-123		

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462496 **QC Analytical Batch(es):** L462704
QC Prep Batch Method: 8151A **Analysis Method:** 8151A
Analysis Description: Phenoxy Acid Herbicides - GC/ECD (TCLP)

Lab Reagent Blank LRB-L462496 Matrix: TCL
Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed	% Recovery	% Rec Limits
TCLP 2,4-D	mg/L	< 0.0200	0.0200	11/05/19 13:08		
TCLP 2,4,5-TP (Silvex)	mg/L	< 0.0020	0.0020	11/05/19 13:08		
DCAA (S)				11/05/19 13:08	100	20-120

Laboratory Control Sample & LCSD LCS-L462496 LCSD-L462496

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
TCLP 2,4-D	mg/L	0.1000	0.0815	0.0864	81.5	86.4	20-120	5.8	20.00
TCLP 2,4,5-TP (Silvex)	mg/L	0.0100	0.0081	0.0079	81.0	79.0	20-120	2.5	20.00
DCAA (S)					88.4	85.0	20-120		

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462350 **QC Analytical Batch(es):** L462353
QC Prep Batch Method: 5030B **Analysis Method:** 8260B
Analysis Description: Volatile Organic Compounds - GC/MS (TCLP)

Lab Reagent Blank LRB-L462350 Matrix: TCL
Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed	% Recovery	% Rec Limits
TCLP Benzene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Carbon Tetrachloride	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Chlorobenzene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Chloroform	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP 1,4-Dichlorobenzene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP 1,2-Dichloroethane	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP 1,1-Dichloroethene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Methyl Ethyl Ketone (MEK)	mg/L	< 0.0200	0.0200	11/01/19 11:36		
TCLP Tetrachloroethene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Trichloroethene	mg/L	< 0.0010	0.0010	11/01/19 11:36		
TCLP Vinyl Chloride	mg/L	< 0.0010	0.0010	11/01/19 11:36		
4-Bromofluorobenzene (S)				11/01/19 11:36	118	71-137
Dibromofluoromethane (S)				11/01/19 11:36	127	70-128
1,2-Dichloroethane - d4 (S)				11/01/19 11:36	125	63-136
Toluene-d8 (S)				11/01/19 11:36	123	70-130

Laboratory Control Sample LCS-L462350

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
TCLP Benzene	mg/L	0.100	0.0946	94.6	70-130
TCLP Carbon Tetrachloride	mg/L	0.100	0.100	100	65-140
TCLP Chlorobenzene	mg/L	0.100	0.106	106	80-120
TCLP Chloroform	mg/L	0.100	0.101	101	80-120
TCLP 1,4-Dichlorobenzene	mg/L	0.100	0.112	112	75-125
TCLP 1,2-Dichloroethane	mg/L	0.100	0.0830	83.0	70-130
TCLP 1,1-Dichloroethene	mg/L	0.100	0.105	105	80-120
TCLP Methyl Ethyl Ketone (MEK)	mg/L	0.100	0.101	101	40-160

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462350 **QC Analytical Batch(es):** L462353
QC Prep Batch Method: 5030B **Analysis Method:** 8260B
Analysis Description: Volatile Organic Compounds - GC/MS (TCLP)

Laboratory Control Sample LCS-L462350

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
TCLP Tetrachloroethene	mg/L	0.100	0.109	109	55-155
TCLP Trichloroethene	mg/L	0.100	0.0896	89.6	70-130
TCLP Vinyl Chloride	mg/L	0.100	0.0924	92.4	80-120
4-Bromofluorobenzene (S)				112	71-137
Dibromofluoromethane (S)				108	70-128
1,2-Dichloroethane - d4 (S)				102	63-136
Toluene-d8 (S)				129	70-130

Matrix Spike & Matrix Spike Duplicate L 87843-MS-L462350 L 87843-MSD-L462350

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
TCLP Benzene	mg/L	< 0.0100	1.00	1.00	1.12	1.22	112	122	70-130	8.5	30.0
TCLP Carbon Tetrachloride	mg/L	< 0.0100	1.00	1.00	1.24	1.30	124	130	65-140	4.7	30.0
TCLP Chlorobenzene	mg/L	< 0.0100	1.00	1.00	1.26	1.23	126*	123*	80-120	2.4	30.0
TCLP Chloroform	mg/L	0.0359	1.00	1.00	1.17	1.29	113	125*	80-120	9.7	30.0
TCLP 1,4-Dichlorobenzene	mg/L	< 0.0100	1.00	1.00	1.14	1.12	114	112	75-125	1.7	30.0
TCLP 1,2-Dichloroethane	mg/L	1.86	1.00	1.00	2.64	2.85	78.0	99.0	70-130	7.6	30.0
TCLP 1,1-Dichloroethene	mg/L	< 0.0100	1.00	1.00	1.34	1.51	134*	151*	80-120	11.9	30.0
TCLP Methyl Ethyl Ketone (MEK)	mg/L	< 0.200	1.00	1.00	1.09	1.19	109	119	40-160	8.7	30.0
TCLP Tetrachloroethene	mg/L	0.0242	1.00	1.00	1.25	1.35	123	133	55-155	7.6	30.0
TCLP Trichloroethene	mg/L	< 0.0100	1.00	1.00	0.982	1.05	98.2	105	70-130	6.6	30.0
TCLP Vinyl Chloride	mg/L	< 0.0100	1.00	1.00	1.20	1.42	120	142*	80-120	16.7	30.0
4-Bromofluorobenzene (S)							109	111	71-137		
Dibromofluoromethane (S)							101	106	70-128		
1,2-Dichloroethane - d4 (S)							107	107	63-136		

Quality Control Data

Client ID: State of Tennessee, Department of Correction

Project Description: State of TN, Dept of Corrections WWTP

Report No: 19-302-0061

QC Prep: L462350

QC Analytical Batch(es): L462353

QC Prep Batch Method: 5030B

Analysis Method: 8260B

Analysis Description: Volatile Organic Compounds - GC/MS (TCLP)

Matrix Spike & Matrix Spike Duplicate L 87843-MS-L462350 L 87843-MSD-L462350

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Toluene-d8 (S)							130	122	70-130		

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462333 **QC Analytical Batch(es):** L462614
QC Prep Batch Method: 3510C **Analysis Method:** 8270D
Analysis Description: Semivolatile Organic Compounds - GC/MS (TCLP)

Lab Reagent Blank LRB-L462333 Matrix: TCL
 Associated Lab Samples: 86954

Parameter	Units	Blank Result	MQL	Analyzed	% Recovery	% Rec Limits
TCLP 2-Methylphenol	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP 3&4 Methylphenol	mg/L	< 0.040	0.040	11/04/19 18:34		
TCLP 2,4-Dinitrotoluene	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP Hexachlorobenzene	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP Hexachlorobutadiene	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP Hexachloroethane	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP Nitrobenzene	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP Pentachlorophenol	mg/L	< 0.040	0.040	11/04/19 18:34		
TCLP Pyridine	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP 2,4,6-Trichlorophenol	mg/L	< 0.020	0.020	11/04/19 18:34		
TCLP 2,4,6-Tribromophenol (S)				11/04/19 18:34	57.7	42-102
TCLP 2-Fluorobiphenyl (S)				11/04/19 18:34	40.5	24-86
TCLP 2-Fluorophenol (S)				11/04/19 18:34	21.0	13-37
TCLP 4-Terphenyl-d14 (S)				11/04/19 18:34	68.0	30-122
TCLP Nitrobenzene-d5 (S)				11/04/19 18:34	41.7	25-78
TCLP Phenol-d6 (S)				11/04/19 18:34	14.5	9-27

Laboratory Control Sample & LCSD LCS-L462333 LCSD-L462333

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
TCLP 2-Methylphenol	mg/L	0.200	0.095	0.107	47.5	53.5	22-97	11.8	20.0
TCLP 3&4 Methylphenol	mg/L	0.200	0.102	0.116	51.0	58.0	21-96	12.8	20.0
TCLP 2,4-Dinitrotoluene	mg/L	0.200	0.168	0.160	84.0	80.0	24-147	4.8	20.0
TCLP Hexachlorobenzene	mg/L	0.200	0.135	0.141	67.5	70.5	18-136	4.3	20.0
TCLP Hexachlorobutadiene	mg/L	0.200	0.111	0.123	55.5	61.5	22-109	10.2	20.0
TCLP Hexachloroethane	mg/L	0.200	0.096	0.100	48.0	50.0	16-107	4.0	20.0

Quality Control Data

Client ID: State of Tennessee, Department of Correction
Project Description: State of TN, Dept of Corrections WWTP
Report No: 19-302-0061

QC Prep: L462333 **QC Analytical Batch(es):** L462614
QC Prep Batch Method: 3510C **Analysis Method:** 8270D
Analysis Description: Semivolatile Organic Compounds - GC/MS (TCLP)

Laboratory Control Sample & LCSD LCS-L462333 LCSD-L462333

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
TCLP Nitrobenzene	mg/L	0.200	0.104	0.117	52.0	58.5	27-117	11.7	20.0
TCLP Pentachlorophenol	mg/L	0.200	0.159	0.167	79.5	83.5	17-142	4.9	20.0
TCLP Pyridine	mg/L	0.200	0.051	0.058	25.5	29.0	10-71	12.8	20.0
TCLP 2,4,5-Trichlorophenol	mg/L	0.200	0.150	0.160	75.0	80.0	26-118	6.4	20.0
TCLP 2,4,6-Trichlorophenol	mg/L	0.200	0.146	0.155	73.0	77.5	26-115	5.9	20.0
TCLP 2,4,6-Tribromophenol (S)					61.5	61.5	42-102		
TCLP 2-Fluorobiphenyl (S)					42.2	45.2	24-86		
TCLP 2-Fluorophenol (S)					20.7	21.7	13-37		
TCLP 4-Terphenyl-d14 (S)					67.7	67.2	30-122		
TCLP Nitrobenzene-d5 (S)					43.2	46.2	25-78		
TCLP Phenol-d6 (S)					14.5	16.0	9-27		

Cooler Receipt Form

Customer Number: **07624**

Customer Name: **State of Tennessee, Department of Correction**

Report Number: **19-302-0061**

Shipping Method

Fed Ex US Postal Lab Other :
 UPS Client Courier Thermometer ID: #39

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Number of coolers received	<input type="text" value="1"/>		
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)		<input type="checkbox"/> Low concentration EnCore samplers (48 hr)	
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)		<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)	
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Signature:

Date & Time:

Kit ID:	0000125590
Initiated By:	Randy Thomas
Initiated Date:	10/10/2019
Project Comment	

CHAIN-OF-CUSTODY



State of Tennessee, Department of Correction
 State of TN, Dept of Corrections WWTP

19-302-0061
 07624
 10-29-2019
 10:31:28

Company Name State of Tennessee, Department of Correction		Company Number 07624		Client Project Manager/Contact Ms. Greta Reed		Purchase Order Number		
Site Name Biosolids		Project Number		<input type="checkbox"/> RUSH – Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed		Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other		
LIMS Project ID Det of Corr WWTP - TCLP		Project Manager Phone # (423) 881-6212		Project Manager Email Greta.R.Reed@tn.gov		Site/Facility ID #		
Date	Time	Sample ID	Matrix	Grab/Comp	# of Cont	Container Type	Preservation	Analyses
10-28-19	10:15	BIOSOLIDS	Solids		3 1 1	Glass - 9oz	NONE	Full TCLP

For Laboratory Use Only			Sampled by (Name - Print)	Client Remarks/Comments			
Ice Y/N	Custody Seals Y/N	Lab Comments	Greta Reed				
			Relinquished by: (SIGNATURE)	Date Time	Received by: (SIGNATURE)	Date Time	
				10-28-19 10:20		10-28-19 10:20	
			Relinquished by: (SIGNATURE)	Date Time	Received by: (SIGNATURE)	Date Time	
Blank/ Cooler Temp 0.9 °C T39 KAT							
			Relinquished by: (SIGNATURE)	Date Time	Received by: (SIGNATURE)	Date Time	
						10/29/19	918