Mercury Minimization Plan

CLINTON WATER 2024

PREPARED FOR:

CITY OF CLINTON, ARKANSAS

SALT ENGINEERS &

PLANNERS PROJECT NO.

08-21-01

February 2024

CERTIFICATE OF AUTHORIZATION
SALT ENGINEERS & PLANNERS, INC.
No. 4011
ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13831
KYLE BRECKENRIDGE
2/2/24

Contents

Scope of Plan 2
Treatment Facility 2
Mercury Monitoring 3
Mercury Sampling 4
Potential Sources of Mercury in the Community 5
Control Measures 5

APPENDICES

Scope of Plan

The City of Clinton, Arkansas owns and operates the East Wastewater Treatment Plant (WWTP) to treat the City's sanitary sewer received by the gravity sewer collection system. The facility is permitted by the Arkansas Energy & Environment (AEE) Department of Environmental Quality (DEQ) under permit AR0048836 with AFIN 71-00018. The city is required to develop and implement a Mercury Minimization Plan (MMP) that identifies potential contributors of mercury into the wastewater treatment system and develop a plan for the reduction of the amount of mercury discharged by the facility.

Included in this plan are the following:

- Existing conditions.
- Overview of prior Cadmium and Mercury sampling
- Identification of potential sources of mercury in the community
- Implementation plan for mercury management
- Mercury Minimization Plan Guide and Sector Worksheets

Treatment Facility

The WWTP has a design flow of 1.2 MGD and discharges into an unnamed tributary of the South Fork of the Litle Red River approximately 600 ft. upstream of the confluence of said tributary with the main channel of the South Fork of the Litle Red River. The current treatment consists of a bar screen, equalization basin, activated sludge system, clarifier, filter, UV disinfection and aeration. This facility is classified as a major municipal since the design flow of the facility listed above is greater than 1.0 MGD.

Mercury Monitoring

Clinton's NPDES permit requires Mercury sampling once a year from a composite sample of the Outfall 001 discharge. During the permit renewal testing performed for the 2015 permit renewal, the initial Priority Pollutant Scan (PPS) of the WWTP effluent identified a Mercury Concentration Maximum Daily Discharge of 28 ng/L and Average Daily Discharge Concentration of 16.7 ng/L. The PPS results were based on three samples using EPA Method 1631 E, and it was noted by DEQ that contamination was suspected due to the Mercury results of the PPS showing 2 of 3 samples with elevated Mercury, and 1 as nondetectable. In an effort to establish the source of the metals contamination, a preliminary investigative sampling was conducted throughout the system (**Appendix A**). The samples were collected using clean sampling techniques (EPA Method 1669), and laboratory analysis was conducted by a third-party lab, not the lab who typically performs WWTP permit sampling. Following this, additional sampling was conducted throughout the Clinton collection system in an effort to identify potential sources. This sampling was outlined in a DEQ approved Sampling Plan prior to beginning the work. Results from this Sampling Plan can be found in **Appendix B.**

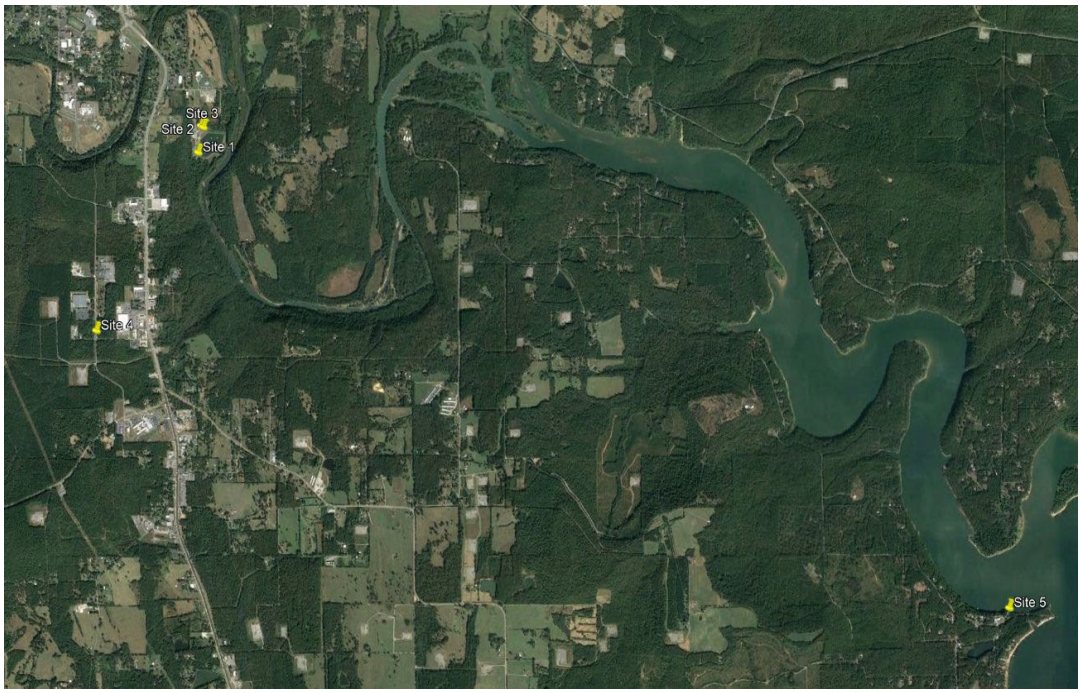

Figure 1 Sampling Site Locations

SALT ENGINEERS & PLANNERS

Figure 2 Sampling Site Locations at WWTP

Mercury Sampling Plan Sampling Locations

Five sampling locations were tested during the investigation.

Site 1 – WWTP Outfall 001

The composite samples will be pulled directly from the head of the cascade aeration steps at the south end of the WWTP property. This corresponds with the permitted Outfall 001 sample location for Permit AR0048836.

Site 2 – WWTP Influent

The composite samples will be pulled from the lower end of the bar screen channel. This will capture only collection system influent while avoiding dilution with equalization lagoon water.

Site 3 – Equalization Lagoon

The composite samples will be pulled directly from the corner pond of the equalization lagoon.

Site 4 - Industrial Park PS

This pump station collects wastewater from the Natural State Processing chicken processing plant that operates out of the Global Performance Group, Inc. building. The industrial user contributes significant amounts of fats, oils, and grease to the Clinton SSCS.

Site 5 – WTP Residuals Pond Outfall

The samples will be pulled from the sample box at the outfall of the backwash ponds. This corresponds with the permitted Outfall 101 sample location for Permit ARG640085.

The EPA minimum detection limit (MDL) for Mercury is 0.2 ng/L and the minimum level of quantitation (ML) is 0.5 ng/L (.0005 ug/L). Refer to Appendix B for a summary of the results of the sampling plan.

Potential Sources of Mercury in the Community

Historically medical facilities, dental clinics, schools, and general industrial users have been shown to be potential sources of mercury. Mercury surveys, (**Appendix C**), were sent to these facilities to establish a baseline of mercury products located or used and to encourage implementation of mercury Best Management Practices.

Control Measures

The City of Clinton will implement the following control measures for their Mercury Minimization Plan:

Source	Control Measure Activities	Performance Measure	Goal
Medical Facilities	Deliver AHA BMP Literature and Surveys	Mailed to facility on 2/5/2024	Mercury Free
Dental Clinics	Deliver ADA BMP Literature and Surveys	Mailed to facility on 2/5/2024	Mercury Capture/Recycling

Schools	Deliver BMP literature and Surveys	Mailed to facility on 2/5/2024	Mercury Free
General Industrial Users	Deliver Chemical Literature and Surveys.	Mailed to facility on 2/5/2024	Mercury Free

I&I Control

Precipitation can also contain concentrations of Mercury. Part of the Mercury Minimization plan would be to minimize I&I within the collection system.

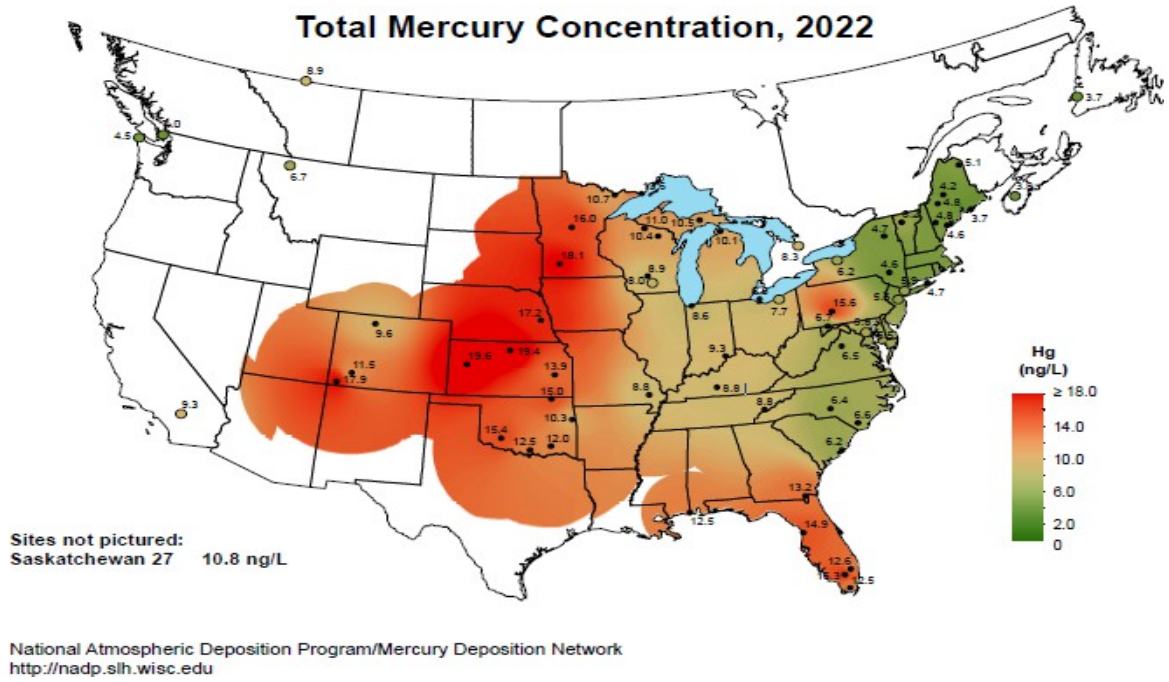

Figure 3 Mercury Concentration in Precipitation

The following is a list of rehabilitation projects scheduled for the City of Clinton Sanitary Sewage Collection System:

Project	Control Measure Activity	Completion	Goal
Manhole Inspection	Locate Manholes in need of rehab.	2024	Locate Manholes in need of rehab.
Manhole Rehab	Rehabilitate Manholes	2025	Minimize I&I into manholes.
Pipeline Rehabilitation	Rehabilitate Pipelines	2026	Minimize I&I into pipes within the system.

APPENDIX A
PRELIMINARY INVESTIGATIVE SAMPLE RESULTS

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
3 Innwood Circle, Suite 220
Little Rock, AR 72211

This report contains the analytical results and supporting information for samples received on September 14, 2021. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Chief Operating Officer or a qualified designee.

by LP
John Overbey
Chief Operating Officer

This document has been distributed to the following:

PDF cc: FTN Associates, Ltd.
ATTN: Mr. Jim Malcolm
jtm@ftn-assoc.com

FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
jmr@ftn-assoc.com

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

SAMPLE INFORMATION

Project Description:
Thirteen (13) water sample(s) received on September 14, 2021
Clinton HG & Cd
Project No. 10362-2724-001

Receipt Details:
A Chain of Custody was provided. The samples were delivered in one (1) ice chest.

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

Sample Identification:

Laboratory ID	Client Sample ID	Sampled Date/Time	Notes
258568-1	Intake A	13-Sep-2021 1030	
258568-2	South Sewer 2	13-Sep-2021 1100	
258568-3	East plant intake	13-Sep-2021 1130	
258568-4	Land App Line	13-Sep-2021 1140	
258568-5	DS WWTF	13-Sep-2021 1150	
258568-6	US WWTF	13-Sep-2021 1230	
258568-7	UWAFK01	13-Sep-2021 1350	
258568-8	Jail House	13-Sep-2021 1415	
258568-9	Honey Hill	13-Sep-2021 1445	
258568-10	WHI0190	13-Sep-2021 1540	
258568-11	Chicken Pump	13-Sep-2021 1600	
258568-12	Field Blank	13-Sep-2021 1450	
258568-13	Trip Blank	13-Sep-2021	1

Notes:
1. Sample label was incomplete in regard to date/time of sampling

Qualifiers:
D Result is from a secondary dilution factor

References:
"Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).
"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
"Standard Methods for the Examination of Water and Wastewaters", (SM).
"American Society for Testing and Materials" (ASTM).
"Association of Analytical Chemists" (AOAC).

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 258568-1
Sample Identification: Intake A 13-Sep-2021 1030

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1132 by 313		Batch: S51598	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1031 by 313		Batch: S51569	

AIC No. 258568-2
Sample Identification: South Sewer 2 13-Sep-2021 1100

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1147 by 313		Batch: S51598	
Mercury, low level		**0.028**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1036 by 313		Batch: S51569	

AIC No. 258568-3
Sample Identification: East plant intake 13-Sep-2021 1130

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1150 by 313		Batch: S51598	
Mercury, low level		**0.072**	0.025	**ug/l**	D
EPA 245.7	Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1128 by 313		Batch: S51569	Dil: 5

AIC No. 258568-4
Sample Identification: Land App Line 13-Sep-2021 1140

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1154 by 313		Batch: S51598	
Mercury, low level		**0.0073**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1045 by 313		Batch: S51569	

AIC No. 258568-5
Sample Identification: DS WWTF 13-Sep-2021 1150

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1157 by 313		Batch: S51598	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1059 by 313		Batch: S51569	

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 258568-6
Sample Identification: US WWTF 13-Sep-2021 1230

Analyte	Result	RL	Units	Qualifier
Cadmium	**< 0.0005**	0.0005	**mg/l**	
EPA 200.8 Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1201 by 313		Batch: S51598	
Mercury, low level	**< 0.0050**	0.0050	**ug/l**	
EPA 245.7 Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1104 by 313		Batch: S51569	

AIC No. 258568-7
Sample Identification: UWAFK01 13-Sep-2021 1350

Analyte	Result	RL	Units	Qualifier
Cadmium	**< 0.0005**	0.0005	**mg/l**	
EPA 200.8 Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1204 by 313		Batch: S51598	
Mercury, low level	**< 0.0050**	0.0050	**ug/l**	
EPA 245.7 Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1109 by 313		Batch: S51569	

AIC No. 258568-8
Sample Identification: Jail House 13-Sep-2021 1415

Analyte	Result	RL	Units	Qualifier
Cadmium	**< 0.0005**	0.0005	**mg/l**	
EPA 200.8 Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1208 by 313		Batch: S51598	
Mercury, low level	**0.051**	0.0050	**ug/l**	
EPA 245.7 Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1114 by 313		Batch: S51569	

AIC No. 258568-9
Sample Identification: Honey Hill 13-Sep-2021 1445

Analyte	Result	RL	Units	Qualifier
Cadmium	**0.00066**	0.0005	**mg/l**	
EPA 200.8 Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1211 by 313		Batch: S51598	
Mercury, low level	**0.014**	0.0050	**ug/l**	
EPA 245.7 Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1118 by 313		Batch: S51569	

AIC No. 258568-10
Sample Identification: WHI0190 13-Sep-2021 1540

Analyte	Result	RL	Units	Qualifier
Cadmium	**< 0.0005**	0.0005	**mg/l**	
EPA 200.8 Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1215 by 313		Batch: S51598	
Mercury, low level	**< 0.0050**	0.0050	**ug/l**	
EPA 245.7 Prep: 15-Sep-2021 0926 by 313	Analyzed: 15-Sep-2021 1123 by 313		Batch: S51569	

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 258568-11
Sample Identification: Chicken Pump 13-Sep-2021 1600

Analyte		Result	RL	Units	Qualifier
Cadmium		**0.0026**	0.0026	**mg/l**	D
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1218 by 313		Batch: S51598	Dil: 5
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0927 by 313	Analyzed: 15-Sep-2021 1230 by 313		Batch: S51570	

AIC No. 258568-12
Sample Identification: Field Blank 13-Sep-2021 1450

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1229 by 313		Batch: S51598	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0927 by 313	Analyzed: 15-Sep-2021 1234 by 313		Batch: S51570	

AIC No. 258568-13
Sample Identification: Trip Blank 13-Sep-2021

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 20-Sep-2021 1620 by 313	Analyzed: 21-Sep-2021 1233 by 313		Batch: S51598	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 15-Sep-2021 0927 by 313	Analyzed: 15-Sep-2021 1239 by 313		Batch: S51570	

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

LABORATORY CONTROL SAMPLE RESULTS

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	0.02 mg/l	99.5	85.0-115			S51598	20Sep21 1620 by 313	21Sep21 1114 by 313		
Mercury, low level	0.01 ug/l	111	76.0-113			S51569	15Sep21 0926 by 313	15Sep21 1017 by 313		
Mercury, low level	0.01 ug/l	99.0	76.0-113			S51570	15Sep21 0927 by 313	15Sep21 1156 by 313		

MATRIX SPIKE SAMPLE RESULTS

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	258569-3	0.02 mg/l	92.7	75.0-125	S51598	20Sep21 1620 by 313	21Sep21 1103 by 313		
	258569-3	0.02 mg/l	94.0	75.0-125	S51598	20Sep21 1620 by 313	21Sep21 1106 by 313		
	Relative Percent Difference:		1.39	20.0	S51598				
Mercury, low level	258568-1	0.01 ug/l	97.6	63.0-111	S51569	15Sep21 0926 by 313	15Sep21 1021 by 313		
	258568-1	0.01 ug/l	83.6	63.0-111	S51569	15Sep21 0926 by 313	15Sep21 1026 by 313		
	Relative Percent Difference:		13.0	18.0	S51569				
Mercury, low level	258569-3	0.01 ug/l	91.4	63.0-111	S51570	15Sep21 0927 by 313	15Sep21 1201 by 313		
	258569-3	0.01 ug/l	82.6	63.0-111	S51570	15Sep21 0927 by 313	15Sep21 1206 by 313		
	Relative Percent Difference:		8.05	18.0	S51570				

LABORATORY BLANK RESULTS

Analyte	Result	RL	LOQ	QC Sample	Preparation Date	Analysis Date	Qual
Cadmium	< 0.0003 mg/l	0.0003	0.0005	S51598-1	20Sep21 1620 by 313	21Sep21 1052 by 313	
Mercury, low level	< 0.0030 ug/l	0.0030	0.0050	S51569-1	15Sep21 0926 by 313	15Sep21 0954 by 313	
Mercury, low level	< 0.0030 ug/l	0.0030	0.0050	S51570-1	15Sep21 0927 by 313	15Sep21 1142 by 313	

ftn

258568

Date	Project Name	Project No.	Project Manager (Print)	Page 1 of 1 2
14 Sep 21	Clinton Hg & Cd	10362-8724-001	Jeremy Rigsby	

Laboratory Name: American Interplex

Submitted by:
FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211
(501) 225-7779 • Fax (501) 225-6738

Sampler Signature(s): Kevin Schanke

Recorded By (Print)

Lab Turn-Around-Time
- ☐ 24 Hours
- ☐ 48 Hours
- ☐ Normal
- ☐ Other: Due: __/__/__

SAMPLE DESCRIPTION

	Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Parameters (Method Number): Clean metals low level Hg Cd	Clean metals low level Hg							Laboratory Notes
1	Intake A	13 Sep 21	1030	X			2		X	X	X							
2	Southsewer 2		1100															
3	East plant intake		1130															
4	Land App line		1140															
5	DS CWTF		1150															
6	US WWTF		1230															
7	UWAFK01		1350															
8	Jail house		1415															
								Container Type		P	G							
								Preservative		NO	NO							

* Matrix: W = Water S = Soil O = Other

G = Glass P = Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate
NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
Kevin Schanke	Kevin Schanke	14 Sep 21	0840				
Relinquished By (Signature)	Print Name	Date	Time	Received By Laboratory (Signature)	Print Name	Date	Time
					DAWN BROWN	9.14.21	0840

Collected near the surface

Laboratory Remarks:

5.9°C

Revision Date 11/22/02

ftn

25856

Date	Project Name	Project No.	Project Manager (Print)	Page of
14 Sep 2021	Clinton Hg & Cd	10362-2724-001	Jeremy Rigsby	2 of 2

Laboratory Name:	Submitted by:
American Interplex	FTN Associates, Ltd. 3 Innwood Circle, Suite 220 Little Rock, AR 72211 (501) 225-7779 • Fax (501) 225-6738
Sampler Signature(s): Kevin Schank	Recorded By (Print)

Lab Turn-Around-Time: ☐ 24 Hours ☐ 48 Hours ☐ Normal ☐ Other: Due: __/__/__

SAMPLE DESCRIPTION

	Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Parameters (Method Number): Clean metals low level Cd	Clean metals low level Hg	Laboratory Notes
9	Honey Hill	13 Sep 21	1445	X			2		X	X	X	
10	WHIS190	"	1540	"			"		"	"	"	
11	Chicken pump	"	1600	"			"		"	"	"	
12	Field Blank	"	1450	"			"		"	"	"	
13	Blank	"		"			"		"	"	"	
							Container Type			P	G	
							Preservative			NO	No	

* Matrix: W = Water S = Soil O = Other

G = Glass P = Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate

NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
Kevin Schank	Kevin Schanke	14 Sep 21	0840				
Relinquished By (Signature)	Print Name	Date	Time	Received By Laboratory (Signature)	Print Name	Date	Time
					DANNY BROWN	9.14.21	0840

Collected near the surface

Laboratory Remarks:

5.9 °C

Revision Date 11/22/02

Environmental Services Company, Inc.

Corporate Office
13715 West Markham
Little Rock, AR 72211
Tel. (501)221-2565 Fax (501)221-1341

Northwest Arkansas Branch
1107 Century Avenue
Springdale, AR 72762
Tel. (479)750-1170 Fax (479)750-1172

Control Number: 2109010462
Customer Name : FTN & ASSOCIATES
Customer Number : 1626
Report Date : 10/05/21

Sample Date : 09/13/21
Sample Time : 1030
Sample Type : GRAB WATER
Sample From : INTAKE B

Collected By: KEVIN SHANLA
Delivery By : KEVIN SHANLA
Work Order :
Purchase Order :

Laboratory Analysis

Analysis Date	Time	By	Parameter	Result	Notes	Quantity	Method	Quality Assurance Precision % RPD	Quality Assurance Accuracy % Recovery
10/01	1548	ACZ	Mercury, low level	11.100 ng/L			EPA 1631E	0.00	93.0
09/22	1120	NTR	Cadmium	< 20.00 ug/L			EPA 200.8	4.22	115.2

* QA data shown is from a different sample or standard on the same date.

All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature Ned Ryerson
Environmental Services Co., Inc.

3KW

Date	Project Name	Project No.	Project Manager (Print)	Page 1 of 1
14 Sep 2021	Clinton Hg & Cd	10362-2724-001	Jeremy Rigsby	

Laboratory Name:	Submitted by:
Environmental Services Co 13715 W. Markham St Little Rock AR 72211	FTN Associates, Ltd. 3 Innwood Circle, Suite 220 Little Rock, AR 72211 (501) 225-7779 • Fax (501) 225-6738
Sampler Signature(s)	Recorded By (Print)

Parameters (Method Number)

Lab Turn-Around-Time
- ☐ 24 Hours
- ☐ 48 Hours
- ☐ Normal
- ☐ Other:
  Due: __/__/__

SAMPLE DESCRIPTION

Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Clean metals Low level Cd	Clean metals Low Level Hg							Laboratory Notes
Intake B	13 Sep 21	1030	X			2		X	X	X							2109010462
						Container Type			P								
						Preservative			NO								

* Matrix: W = Water S = Soil O = Other

G = Glass P= Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate

NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
	Kevin Schanla	14 Sep 21	1000				
Relinquished By (Signature)	Print Name	Date	Time	Received By Laboratory (Signature)	Print Name	Date	Time
					Benjamin Ivy	9/14/21	1000

Collected near the surface

Laboratory Remarks:

BXW

Revision Date 11/22/02

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
3 Innwood Circle, Suite 220
Little Rock, AR 72211

This report contains the analytical results and supporting information for samples received on April 28, 2022. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Chief Operating Officer or a qualified designee.

Steve Bradford
Deputy Laboratory Director

This document has been distributed to the following:

PDF cc: FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
jmr@ftn-assoc.com

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

SAMPLE INFORMATION

Project Description:
Four (4) water sample(s) received on April 28, 2022
Clinton HG & CD
10362-2724-001

Receipt Details:
A Chain of Custody was provided. The samples were delivered in one (1) ice chest.

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

Sample Identification:

Laboratory ID	Client Sample ID	Sampled Date/Time	Notes
265124-1	Jailhouse Pump	27-Apr-2022 1150	
265124-2	Honey Hill Pump	27-Apr-2022 1210	
265124-3	UWAFK 01	27-Apr-2022 1245	
265124-4	WHI0190	27-Apr-2022 1310	

Case Narrative:
There were no qualifiers for this data and all samples met quality control criteria.

References:
"Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).
"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
"Standard Methods for the Examination of Water and Wastewaters", (SM).
"American Society for Testing and Materials" (ASTM).
"Association of Analytical Chemists" (AOAC).

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 265124-1
Sample Identification: Jailhouse Pump 27-Apr-2022 1150

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1119 by 313		Batch: S52569	
Mercury, low level		**0.028**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 0941 by 313	Analyzed: 02-May-2022 1114 by 313		Batch: S52554	

AIC No. 265124-2
Sample Identification: Honey Hill Pump 27-Apr-2022 1210

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1122 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 0941 by 313	Analyzed: 02-May-2022 1118 by 313		Batch: S52554	

AIC No. 265124-3
Sample Identification: UWAFK 01 27-Apr-2022 1245

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1132 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 0941 by 313	Analyzed: 02-May-2022 1123 by 313		Batch: S52554	

AIC No. 265124-4
Sample Identification: WHI0190 27-Apr-2022 1310

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1135 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 0941 by 313	Analyzed: 02-May-2022 1128 by 313		Batch: S52554	

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

LABORATORY CONTROL SAMPLE RESULTS

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	0.02 mg/l	98.5	85.0-115			S52569	04May22 0833 by 313	04May22 1056 by 313		
Mercury, low level	0.01 ug/l	94.1	76.0-113			S52554	02May22 0942 by 313	02May22 1031 by 313		

MATRIX SPIKE SAMPLE RESULTS

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	265126-1	0.02 mg/l	97.4	75.0-125	S52569	04May22 0833 by 313	04May22 1059 by 313		
	265126-1	0.02 mg/l	97.0	75.0-125	S52569	04May22 0833 by 313	04May22 1102 by 313		
	Relative Percent Difference:		0.463	20.0	S52569				
Mercury, low level	265072-3	0.01 ug/l	91.9	63.0-111	S52554	02May22 0942 by 313	02May22 1036 by 313		
	265072-3	0.01 ug/l	95.0	63.0-111	S52554	02May22 0942 by 313	02May22 1040 by 313		
	Relative Percent Difference:		2.91	18.0	S52554				

LABORATORY BLANK RESULTS

Analyte	Result	RL	LOQ	QC Sample	Preparation Date	Analysis Date	Qual
Cadmium	< 0.0003 mg/l	0.0003	0.0005	S52569-1	04May22 0833 by 313	04May22 1052 by 313	
Mercury, low level	< 0.0030 ug/l	0.0030	0.0050	S52554-1	02May22 0942 by 313	02May22 1026 by 313	

ftn

265.124

Date	Project Name	Project No.	Project Manager (Print)	Page 1 of 1
28 Apr. 2022	Clinton Hg & Cd	103627-2724-001	Jeremy Rigsby	

Laboratory Name: American Interplex

Submitted by:
FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211
(501) 225-7779 • Fax (501) 225-6738

Sampler Signature(s):

Recorded By (Print): Kevin Schanke

Parameters (Method Number)

Lab Turn-Around-Time
- ☐ 24 Hours
- ☐ 48 Hours
- ☐ Normal
- ☐ Other:
  Due: __/__/__

SAMPLE DESCRIPTION

Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Clean metals low level Cd	Clean metals low level Hg	Laboratory Notes
Jailhouse pump	27 Apr 22	1150				2		X			
Hoard Hill pump		1210									
UWAFK01		1245									
UWH10190		1310				1		1			
Container Type									P		
Preservative									NO		

* Matrix: W = Water S = Soil O = Other

G = Glass P = Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate
NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
	Kevin Schanke	28 Apr 22	1600				
Relinquished By (Signature)	Print Name	Date	Time	Received By Laboratory (Signature)	Print Name	Date	Time
					D. BROWN	4-28-22	16:19

Collected near the surface

Laboratory Remarks:

5.9c

Revision Date 11/22/02

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
3 Innwood Circle, Suite 220
Little Rock, AR 72211

This report contains the analytical results and supporting information for samples received on April 28, 2022. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Chief Operating Officer or a qualified designee.

Steve Bradford
Deputy Laboratory Director

This document has been distributed to the following:

PDF cc: FTN Associates, Ltd.
ATTN: Mr. Jeremy Rigsby
jmr@ftn-assoc.com

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

SAMPLE INFORMATION

Project Description:
Eight (8) water sample(s) received on April 28, 2022
Clinton Hg & Cd
10362-2724-001

Receipt Details:
A Chain of Custody was provided. The samples were delivered in one (1) ice chest.

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

Sample Identification:

Laboratory ID	Client Sample ID	Sampled Date/Time	Notes
265125-1	East Plant Intake	27-Apr-2022 0915	
265125-2	Outfall 001	27-Apr-2022 0930	
265125-3	Field Blank	27-Apr-2022 0935	
265125-4	Downstream WWTP	27-Apr-2022 0950	
265125-5	Upstream WWTP	27-Apr-2022 1010	
265125-6	Intake	27-Apr-2022 1035	
265125-7	South Sewer Pump	27-Apr-2022 1100	
265125-8	Chicken Pump	27-Apr-2022 1120	

Case Narrative:
There were no qualifiers for this data and all samples met quality control criteria.

References:
"Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).
"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
"Standard Methods for the Examination of Water and Wastewaters", (SM).
"American Society for Testing and Materials" (ASTM).
"Association of Analytical Chemists" (AOAC).

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 265125-1
Sample Identification: East Plant Intake 27-Apr-2022 0915

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1138 by 313		Batch: S52569	
Mercury, low level		**0.033**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1215 by 313		Batch: S52556	

AIC No. 265125-2
Sample Identification: Outfall 001 27-Apr-2022 0930

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1141 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1211 by 313		Batch: S52556	

AIC No. 265125-3
Sample Identification: Field Blank 27-Apr-2022 0935

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1145 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1220 by 313		Batch: S52556	

AIC No. 265125-4
Sample Identification: Downstream WWTP 27-Apr-2022 0950

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1148 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1225 by 313		Batch: S52556	

AIC No. 265125-5
Sample Identification: Upstream WWTP 27-Apr-2022 1010

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1151 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1230 by 313		Batch: S52556	

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

ANALYTICAL RESULTS

AIC No. 265125-6
Sample Identification: Intake 27-Apr-2022 1035

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1154 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1234 by 313		Batch: S52556	

AIC No. 265125-7
Sample Identification: South Sewer Pump 27-Apr-2022 1100

Analyte		Result	RL	Units	Qualifier
Cadmium		**< 0.0005**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1158 by 313		Batch: S52569	
Mercury, low level		**0.051**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1239 by 313		Batch: S52556	

AIC No. 265125-8
Sample Identification: Chicken Pump 27-Apr-2022 1120

Analyte		Result	RL	Units	Qualifier
Cadmium		**0.0017**	0.0005	**mg/l**	
EPA 200.8	Prep: 04-May-2022 0833 by 313	Analyzed: 04-May-2022 1201 by 313		Batch: S52569	
Mercury, low level		**< 0.0050**	0.0050	**ug/l**	
EPA 245.7	Prep: 02-May-2022 1118 by 313	Analyzed: 02-May-2022 1244 by 313		Batch: S52556	

AMERICAN INTERPLEX CORPORATION LABORATORIES

FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, AR 72211

LABORATORY CONTROL SAMPLE RESULTS

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	0.02 mg/l	98.5	85.0-115			S52569	04May22 0833 by 313	04May22 1056 by 313		
Mercury, low level	0.01 ug/l	82.7	76.0-113			S52556	02May22 1119 by 313	02May22 1147 by 313		

MATRIX SPIKE SAMPLE RESULTS

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Cadmium	265126-1	0.02 mg/l	97.4	75.0-125	S52569	04May22 0833 by 313	04May22 1059 by 313		
	265126-1	0.02 mg/l	97.0	75.0-125	S52569	04May22 0833 by 313	04May22 1102 by 313		
	Relative Percent Difference:		0.463	20.0	S52569				
Mercury, low level	265125-2	0.01 ug/l	85.0	63.0-111	S52556	02May22 1119 by 313	02May22 1152 by 313		
	265125-2	0.01 ug/l	87.1	63.0-111	S52556	02May22 1119 by 313	02May22 1156 by 313		
	Relative Percent Difference:		2.41	18.0	S52556				

LABORATORY BLANK RESULTS

Analyte	Result	RL	LOQ	QC Sample	Preparation Date	Analysis Date	Qual
Cadmium	< 0.0003 mg/l	0.0003	0.0005	S52569-1	04May22 0833 by 313	04May22 1052 by 313	
Mercury, low level	< 0.0030 ug/l	0.0030	0.0050	S52556-1	02May22 1119 by 313	02May22 1142 by 313	

ftn

265125

Date	Project Name	Project No.	Project Manager (Print)	Page 1 of 1
28 April 2002	Clinton Hg & Cd	10362-3724-001	Jeremy Rigsby	

Laboratory Name:	Submitted by:	Parameters (Method Number)	Lab Turn-Around-Time
American Interplex	FTN Associates, Ltd. 3 Innwood Circle, Suite 220 Little Rock, AR 72211 (501) 225-7779 • Fax (501) 225-6738	Clean metals low level Cd Clean metals low level Hg	☐ 24 Hours ☐ 48 Hours ☐ Normal ☐ Other: Due: __/__/__
Sampler Signature(s)	Recorded By (Print)		
	Kevin Schanke		

SAMPLE DESCRIPTION

	Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Clean metals low level Cd	Clean metals low level Hg	Laboratory Notes
1	East Plant Intake	27 April 02	0915				2		X	X	X	
2	Outfall 001		930									
3	Field Blank		935									
4	Downstream WWTP		0950									
5	Upstream WWTP		1010									
6	Intake		1035									
7	South Sewer Ramp		1100									
8	Chicken Ramp		1120									
							Container Type			P		
							Preservative			NO		

* Matrix: W = Water S = Soil O = Other

G = Glass P = Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate

NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
	Kevin Schanke	28 April 02	1600				
Relinquished By (Signature)	Print Name	Date	Time	Received By Laboratory (Signature)	Print Name	Date	Time
					DANNY BROWN	4-28-02	1619

Collected near the surface

Laboratory Remarks:

5.9°C

Revision Date 11/22/02

Environmental Services Company, Inc.

Corporate Office
13715 West Markham
Little Rock, AR 72211
Tel. (501)221-2565 Fax (501)221-1341

Northwest Arkansas Branch
1107 Century Avenue
Springdale, AR 72762
Tel. (479)750-1170 Fax (479)750-1172

Control Number: 2205010357
Customer Name : FTN & ASSOCIATES
Customer Number : 1626
Report Date : 05/17/22

Sample Date : 04/27/22
Sample Time : 0930
Sample Type : GRAB WATER
Sample From : OUTFALL001 CLIN HGCD

Collected By: UNKNOWN
Delivery By : KEVIN SCHANKE
Work Order :
Purchase Order :

Laboratory Analysis

Analysis Date	Time	By	Parameter	Result	Notes	Quantity	Method	Quality Assurance Precision % RPD	Quality Assurance Accuracy % Recovery
05/09	1652	ARA	Mercury, low level	< 0.500 ng/L			EPA 1631E	0.60	96.5
05/09	1356	NTR	Cadmium	4.06 ug/L			EPA 200.8	1.13	84.3 *

* QA data shown is from a different sample or standard on the same date.

All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature _____
Environmental Services Co., Inc.

ftn

Date	Project Name	Project No.	Project Manager (Print)	
02 May 2022	Clinton Hg & Cd	10362-2724-001	Jeremy Rigsby	Page 1 of 1

Laboratory Name:	Submitted by:
Environmental Services Co Inc 13715 W. Markham Little Rock AR 72211	FTN Associates, Ltd. 3 Innwood Circle, Suite 220 Little Rock, AR 72211 (501) 225-7779 • Fax (501) 225-6738
Sampler Signature(s)	Recorded By (Print)

Parameters (Method Number)

Lab Turn-Around-Time

☐ 24 Hours
☐ 48 Hours
☑ Normal
☐ Other:
Due: __/__/__

SAMPLE DESCRIPTION

Sample Identification	Date	Time	Matrix* W	Matrix* S	Matrix* O	No. of Containers	Comp	Grab	Clean metals low level Cd	Clean metals low level Hg							Laboratory Notes
Outfall 001	27 April 22	0930	X			2		X	X	X							(2) 8oz
2205010357																	
Container Type									P								
Preservative									NO								

* Matrix: W = Water S = Soil O = Other

G = Glass P= Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate
NO = None S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Relinquished By (Signature)	Print Name	Date	Time	Received By (Signature)	Print Name	Date	Time
[signature]	Kevin Schanke	02 May 2022	1500	Linnea R. Brown	Linnea R. Brown	5/2/22	~~1555~~ 1505 LRB 5/2/22
Relinquished By ~~(Signature)~~ To: Secure walk in cooler LRB 5/2/22	Print Name By: Michael Radford	5/2/22 ~~4/26/22~~ MSR	17:25	Received By Laboratory (Signature) Astreya Clarke	Print Name AB	5-3-22	1210

Collected near the surface
Relinquished by Linnea Brown to Michael Radford 17:25 5/2/22 LRB

Laboratory Remarks:
RECIEVED FROM SECURE WALKIN COOLER
AAC (1210)

APPENDIX B
SAMPLING PLAN SAMPLING RESULTS

AIC (now Eurofins) Results

Cd & Hg reported in µg/L - all others in mg/L or %

Site #		Decont.	Eq. Blank	12/7/2022	12/14/2022	12/21/2022	12/28/2022	1/4/2023	1/11/2023	Average	Max.	Min.
1	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Hg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Hg	ND	ND	ND	0.0084	0.012	ND	0.0087	0.16	0.05	0.16	0.01
	BOD			300	16	76	540	20	54	167.67	540.00	16.00
	TSS			550	22	20	780	30	36	239.67	780.00	20.00
	TKN			25	5	10	89	5.3	12	24.38	89.00	5.00
	TP			2.5	0.68	1.2	3	0.59	1.5	1.58	3.00	0.59
3	Cd	ND	ND	0.79	3.3	ND	0.79	0.84	0.75	1.29	3.30	0.75
	Hg	ND	0.019	ND	0.89	0.011	ND	0.38	0.17	0.29	0.89	0.01
	BOD			60	180	49	31	69	98	81.17	180.00	31.00
	TSS			410	1500	78	190	530	300	501.33	1500.00	78.00
	TKN			22	36	18	14	14	22	21.00	36.00	14.00
	TP			3.8	15	2	2.8	5.5	4.7	5.63	15.00	2.00
4	Cd	ND	ND	ND			0.61	0.65	0.54	0.60	0.65	0.54
	Hg	ND	ND	ND			ND	0.067	ND	0.07	0.07	0.07
	CBOD			1500			1900	2700	3100	2300.00	3100.00	1500.00
	TSS			650			1200	1800	790	1110.00	1800.00	650.00
	TKN			130			280	150	180	185.00	280.00	130.00
	NH3-N			43			38	5.8	140	56.70	140.00	5.80
	COD			2800			3800	4600	4900	4025.00	4900.00	2800.00
4	% solids			10.00%	3.30%	1.30%	9.80%	2.00%	0.60%	0.05	0.10	0.01
	O&G			34.00%	0.20%	73.00%	2.10%	2.50%	23.00%	0.22	0.73	0.00
5	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Hg	ND	ND	0.0012	0.0022	ND	0.0012	0.0059	0.011	0.00	0.01	0.00

ESC Results

Cd & Hg reported in µg/L - all others in mg/L or %

Site #		12/7/2022	12/14/2022	12/21/2022	12/28/2022	1/4/2023	1/11/2023	Average	Max.	Min.
	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	Hg	0.00071	0.000813	0.00278	0.00103	0.000575	ND	0.001182	0.002780	0.000575
	CBOD							0.000000	0.000000	0.000000
	TSS							0.000000	0.000000	0.000000
	NH3-N							0.000000	0.000000	0.000000
	DO							0.000000	0.000000	0.000000
	FCB							0.000000	0.000000	0.000000
	E Coli							0.000000	0.000000	0.000000
	TP							0.000000	0.000000	0.000000
	NO3 + NO2 - N							0.000000	0.000000	0.000000
2	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Hg	0.0072	0.00443	0.0192	0.0343	0.0216	0.0253	0.02	0.03	0.00
3	Cd	0.78	0.54	ND	0.59	1.44	ND	0.84	1.44	0.54
	Hg	0.0443	0.0115	0.0519	0.158	0.00126	0.0655	0.06	0.16	0.00
4	Cd	ND			0.52	0.56	ND	0.54	0.56	0.52
	Hg	0.0184			0.0527	0.0243	0.0253	0.03	0.05	0.02
5	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Hg	0.000879	0.00109	0.0212	0.0277	0.00707	0.00816	0.01	0.03	0.00

DEQ Results
Cd reported in µg/L

Site #		12/7/2022	12/14/2022	12/21/2022	12/28/2022	1/4/2023	1/11/2023	Average	Max.	Min.
1	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	Cd	ND	ND	ND	0.208	ND	ND	0.21	0.21	ND
3	Cd	0.7992	2.7692	0.17	0.7551	1.0202	0.7933	1.05	2.77	0.17
4	Cd	0.127			0.5941	0.6611	0.7458	0.53	0.75	0.13
5	Cd	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX C
SURVEYS AND WORKSHEETS

Dental Facility Mercury Survey

(Questions adapted from the American Dental Association's Best Management Practices for Amalgam Waste.)

The City of Clinton, AR is implementing a Mercury Minimization Plan per NPDES permit requirements. As a potential source of mercury your facility is being asked to complete and return the following survey questions. Thank you for your cooperation.

	Yes	No
Has all bulk mercury been eliminated from stock at your dental office?		X
Does your dental office use precapsulated alloys?	X	
Does you dental office recycle disposable amalgam capsules?		X
Does your dental office capture and recycle non-contact scrap amalgam? yes	X	
Does your dental office capture and recycle contact amalgam including the contents of chair-side traps?	X	
Does your dental office recycle contact amalgam retained by the vacuum pump filter?	X	
Does your dental office disinfect and recycle extracted teeth with amalgam fillings?		X
Does your dental office use non-chlorine, non-bleach cleaners that minimize dissolution of amalgam?	X	
Does your dental office have and maintain an amalgam separator meeting ISO standards? Manufacturer: Solmetex Model: Hg 5	X	

Name and address of vendor where amalgam is recycled: Solmetex

Vendor contact name, email, phone #: 800 216 5505

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of the individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete.

Kyle Hensley DDS 1919 Hwy 65 So Clinton, 4 chairs 4employees

Name of Facility | Address | Size of facility (No. of chairs, employees, etc.)

[signature] DDS 1-25-24 5012455382

Name of Official (printed) | Signature | Title | Date | Phone

Return completed survey to: _____

CITY OF CLINTON
CLINTON WATER AND SEWER DEPARTMENT
P.O. BOX 277
CLINTON, AR 72031
TELEPHONE (501) 745-4320
FAX (501) 745-2164

Richard McCormac, Mayor

William Hinchey, Manager

November 29, 2023

Global Foods
PO Box 1710
Clinton, AR 72031

RE: Mercury Minimization Plan

To Whom It May Concern:

Arkansas Department of Environmental Quality (ADEQ) wants all wastewater systems to have a mercury minimization plan in effect for their effluent wastewater to minimize mercury. We test our effluent wastewater, and it is consistently below our permit limits. The mercury minimization plan needs to include a way to reduce the mercury in the wastewater even more if possible. In response, we would like you to fill out the attached questionnaire and mail it back in the postage paid envelope. We will use the information that you provide in the questionnaire to help us with our mercury minimization plan for ADEQ.

Thank you in advance for filling out the questionnaire. If you have any questions or need any further information, please contact me at 501-745-4320.

Sincerely,

Jackie William Hinchey, Jr.

Jackie William Hinchey, Jr., Manager
Clinton Water and Sewer Department

Industrial Facility Mercury Survey

The City of Clinton, AR is implementing a Mercury Minimization Plan per NPDES permit requirements. As a potential source of mercury your facility is being asked to complete and return the following survey questions. Thank you for your cooperation.

	Yes	No
Has your facility established a mercury policy to reduce and/or virtually eliminate mercury at your facility?	✓	
Has you facility developed a plan to phase out mercury containing devices? Reduce	✓	
Has your facility established mercury management protocols for safe handling, mercury spill cleanup and disposal procedures and education and training of employees?	✓	
Has your facility inventoried all mercury containing devices (switches, thermostats, etc.)?	✓	
Has your facility labeled mercury containing devices to recycle at end of life?	✓	
Has your facility implemented a program to recycle fluorescent lamps?	✓	
Has your facility implemented a battery collection program?	✓	
Has your facility requested certificates of analysis for bulk chemicals suspected to have mercury contamination?	✓	
Has your facility reduced the use of mercury containing chemicals as much as feasible?	✓	
If applicable, has your facility inventoried mercury containing lab chemicals, thermometers, and other devices with a plan for non-mercury product substitution?	✓	

Name, email address and phone # of facility contact person: Nancy Stegall, nancyglobalfood@gmail.com, 501-368-5167

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of the individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete.

Global Foods Group, Inc. 245 Quality Drive Clinton, AR 72031

Name of Facility — Address

Nancy Stegall Nancy Stegall FSQA Director 12-13-23 501-368-5167

Name of Official (printed) — Signature — Title — Date — Phone

Return completed survey to: Jackie William Hinchey, Manager, Clinton Water + Sewer Dept.

School and Educational Facility Mercury Survey

(Questions adapted from the "Green and Healthy Schools" criteria)

It is the intention of the Mercury Minimization Program to encourage implementation of mercury Best Management Practices (BMPs). Check the applicable box if a BMP had been implemented or scheduled and the corresponding date it was implemented or scheduled to start.

	Complete	
	Yes	No
Has school completed a mercury products inventory for the facility?	✓	
Does your school have an action plan to eliminate mercury containing items that were found as a result of the inventory? NA		
Has all the elemental mercury been eliminated from classrooms at your facility?	✓	
Have all mercury lab thermometers been eliminated from classrooms?	✓	
Have all mercury lab barometers been eliminated from classrooms?	✓	
Are any mercury containing compounds present at your facility?		✓
Have all fever thermometers been eliminated from the nurse's office?	✓	
Is there a mercury spill kit and staff trained to use it? NA		

Name, email address and phone # of facility contact person: Jeremy Williams 501-757-0276 williamsje@clintonsd.org

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of the individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete.

Clinton School District	765 yellowjacket Lane	1250
Name of Facility	Address	Size of facility (No. of students, employees)

Facilty Director	Jeremy Williams	Director	12-6-23	501-757-0276
Name of Official (printed)	Signature	Title	Date	Phone

Return completed survey to: _____

Arkansas Department of Environmental Quality
Mercury Minimization Plan Status Report

This document is submitted to fulfill the requirements as set forth in the NPDES permit requiring the development of a Mercury Minimization Plan. The Report serves both as a compliance monitoring tool for the ADEQ, and as a revising process for the discharger to make necessary revisions to the MMP where problems were discovered and where new areas need investigation.

Date: 1-26-24

Permit Number: AR 0048836

Additional Permits covered by this Report:

Company Name: City of Clinton Water & Sewer

Facility Name: Clinton East WWTF

Contact Name: Richard McCormac / Jackie William Hinchey, Jr.

Contact Phone: (501) 253-0160 / 501-253-8177

1. Was the Mercury Minimization Plan as submitted to ADEQ followed completely during the previous permit cycle?

   ☑ Yes ☐ No

   If no, attach supporting documentation that clearly describes any and all deviations from the plan. Include a list of all actions or conditions that lead to the variation as well as any interaction with ADEQ relation to the variation.

2. List any *confirmed* sources of Mercury to the treatment system including an average annual loading to the treatment system (may be estimated) and method by which the source was identified.

3. List any *potential* sources of Mercury to the treatment system including an average annual loading to the treatment system (may be estimated).

4. Attach all analytical results from all monitoring performed during the last year for Mercury, including detection/quantification level, method used and location of sample (ex: influent, effluent, sludge, Main Street Lift Station, XYZ Cleaners, etc..)

5. Attach a list of all actions taken to reduce or eliminate sources of Mercury from the treatment system. Actions may include treatment, remediation, investigation, operation, management activities, public outreach, distribution of materials, implementation of BMP's, contact with industrial users, inspection of industrial users, etc. If no actions were taken to reduce or eliminate sources of Mercury to the treatment system, please explain why.

6. Attach a list of all actions planned to further reduce or eliminate sources of Mercury.

7. Provide additional comments or information on the treatment systems progress using the Mercury Minimization Plan to proceed toward achievement of the goal to reduce effluent concentrations of Mercury.

Mercury Certification Form for Municipalities

I. PERMITTEE/OPERATOR INFORMATION

Permit Number: AR0048836 AFIN (if known):

Permittee (Legal Name): Clinton East WW Treatment Facility

Permittee Telephone Number: 501-745-4320

Permittee Mailing Address: PO Box 277

Permittee Fax Number: 501-745-2164

Permittee City: Clinton

Permittee E-mail Address: clintonwatersa@gmail.com

Permittee State: AR Zip: 72031

II. MERCURY EXCLUSION CERTIFICATION

By signing and submitting this Mercury Exclusion Certification form, the permittee in Section I is certifying that there are no known or suspected operations that would reasonably be expected to contain mercury in their discharge that is accepted by the Permittees wastewater treatment plant.

Please red each question and check either "Yes" or "No" in the appropriate box. **If you answer "Yes" to any of the questions (a) through (e), you are <u>not</u> eligible for the Mercury Exclusion Certification in the permit and the effluent must be sampled using EPA Method 1631; which has a concentration detection level of 0.0002 µg/l of mercury.**

		Yes	No
a.	Do you accept waste that contains mercury from Medical Facilities such as Hospital, Clinics, Nursing Homes, and Veterinarians?	☐	☑
b.	Do you accept waste that contains mercury from Dental Clinics?	☐	☑
c.	Do you accept waste that contains mercury from schools that have laboratories?	☐	☑
d.	Do you accept waste that contains mercury from industrial users?	☐	☑
e.	Do you accept waste that contains mercury from other sources that may not be mentioned above?	☐	☑

III. CERTIFICATION STATEMENT

"As the responsible official of this wastewater treatment plant and collection system, I hereby certify that none of the above types of entities discharge wastewater to the sewer collection system which serves the wastewater treatment plant permitted under the NPDES permit number listed above. Therefore, there are no known or suspected operations that would reasonably be expected to discharge mercury to the collection system serving this wastewater treatment plant at levels that could cause elevated levels of mercury to be discharged from the wastewater treatment plant. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I understand that I am obligated to submit a Mercury Exclusion Certification form once **every five years** to the NPDES permitting authority with the renewal application.

Typed or Printed Name: Richard McCormac **Title:** Mayor

Signature: Richard McCormac **Date:** 1-26-24