WASTEWATER SAMPLING PLAN

CLINTON WATER
2022

PREPARED FOR:

CITY OF CLINTON, ARKANSAS

SALT ENGINEERS & PLANNERS

PROJECT NO. 08-22-02

SEPTEMBER, 2022

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13831
KYLE BRECKENRIDGE
9/15/22

Purpose and Background

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 WWTP has a design flow of 1.2 MGD and discharges into an unnamed tributary of the South Fork of the Little Red River approximately 600 ft. upstream of the confluence of said tributary with the main channel of the South Fork of the Little Red River. During the permit renewal testing performed for the 2015 permit renewal, the initial Priority Pollutant Scan (PPS) of the WWTP effluent identified a Cadmium Concentration Maximum Daily Discharge of 2.0 µg/L and Average Daily Discharge Concentration of 1.4 µg/L. The PPS results were based on three samples using EPA Method 200.8, 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 non-detectable - (Refer to **Appendix B** for the DEQ phone call record establishing suspected sample contamination). At the time, these Cadmium levels were reported to be below the Rule 2 Water Quality Standard of the State of Arkansas, which are calculated based upon water hardness. A stream hardness concentration of 25 mg/L was used to establish the actual Criterion Maximum Concentration (CMC) and Criterion Continuous Concentration (CCC)for the receiving stream. Current Water Quality Standards for Cadmium with 25 mg/L hardness equate to a CMC of 4.00 µg/L and CCC of 1.80 µg/L. The Concentration Multiplier was established as 2.13 and results in an Instream Waste Concentration (IWC) of 2.77 µg/L, which is above the current CCC.

The permit renewal for the Clinton WWTP was delayed by DEQ due to the discussion around the Mercury Total Maximum Daily Load (TMDL) established for the Little Red River Watershed. The permit expired on November 30, 2015. The permit renewal was delayed until July 1, 2019, on which the new permit took effect. The new permit established a Mass limit for Cadmium of 0.02 lbs/day (Monthly Average), an implied 2.0 µg/L concentration limit at the 1.2 MGD design flow. Additionally, the permit established staged Concentration limits of 2.01 µg/L (Monthly Average), and 4.02 µg/L (7-Day Average), that take effect 3 years after the effective date, or July 1, 2022.

The WWTP is not equipped to remove heavy metals to these trace levels. The Clinton Sanitary Sewer Collection System (SSCS) receives no known discharge from Significant Industrial Users (SIUs) nor any Categorical Industrial Users (CIUs). In an effort to establish the source of the metals contamination, sampling was performed across the Clinton SSCS and within the local watershed. Two sampling events were performed, one at watershed low-flow, and one at water-shed high flow. The sampling results are included in **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. The sample results did not identify the source of the Cadmium but did provide additional evidence for possible contamination by the lab currently used for WWTP permit collection and sampling.

This Sampling Plan will detail an effort to further expand the Cadmium and Mercury sampling to document the suspected collection/laboratory contamination as the source of the elevated Cadmium. Mercury will be included since there is an established TMDL on the watershed and future permits are likely to establish a concentration limit.

Figure 1: Location of Clinton WWTP within Watershed (110100140602)

Sampling Project Description

The intent of the sampling is to document the fate and transport of Cadmium (Cd) and Mercury (Hg) within the Clinton SSCS to the point of discharge at Outfall 001 at the Clinton WWTP (AR0048836). The sampling results for the WWTP outfall will be compared with permit samples to document sample contamination, if occurring. EPA Method 1669 – "Clean Sampling Techniques" will be followed by the third-party laboratory utilized for sample collection. The table below shows the information for the current permit sampling lab, which also conducted the 2015 PPS upon which Cadmium limits were based. A third-party laboratory (AIC) will be utilized for the preparation of all sample bottles derived from the single 24-hour composite collected, utilizing EPA Sampling Method 1669. AIC and DEQ Labs will run Cd & Hg duplicate analyses.

AIC Labs will be responsible for initiating the composite sampling event by first rinsing the entire sample collection system with sample water by pumping approximately ½ gallon of distilled water through the sampling tube into the composite container and discarding. AIC Labs will then collect an equipment blank for QA/QC purposes. The sampler will then be programmed to collect a composite sample consisting of 24 individual collections at a rate of approximately 350 mL per hour. Each hourly collection is estimated to take approximately 5 to 10 seconds, depending on the sampling pump head and composite sampling unit utilized.

Laboratory
Environmental Services Company (ESC) Little Rock, AR *(Current Permit Sampling Lab)* *(Cd & Hg Duplicates)*
American Interplex Corporation Laboratories (AIC) Little Rock, AR *(Proposed Third-Party Lab using EPA Method 1669 Sampling Techniques to prepare all samples)* *(Cd & Hg Duplicates)*
Arkansas Department of Energy and Environment Department of Environmental Quality Laboratories (DEQ) North Little Rock, AR (Cd & Hg Duplicates)

Sampling Site Descriptions

The table below details the sampling sites chosen for analysis.

Site #	Site	Parameters Analyzed	Lab assigned for conducting Sampling & Analysis
Existing Auto-Sampler	WWTP Outfall 001 (using existing auto-sampler)	Required Permit Sampling for AR0048836 (includes Cd & Hg)	ESC
1	WWTP Outfall 001	Cd & Hg	AIC
	WWTP Outfall 001	Cd & Hg	ESC
	WWTP Outfall 001	Cd & Hg	DEQ
2	WWTP Influent	BOD, TSS, TKN, TP, Cd, & Hg	AIC
	WWTP Influent	Cd & Hg	ESC
	WWTP Influent	Cd & Hg	DEQ
3	Equalization Lagoon	BOD, TSS, TKN, TP, Cd, & Hg	AIC
	Equalization Lagoon	Cd & Hg	ESC
	Equalization Lagoon	Cd & Hg	DEQ
4	Industrial Park PS	TSS, O&G, CBOD, COD, NH3-N, TKN, Cd, & Hg	AIC
	Industrial Park PS	Cd & Hg	ESC
	Industrial Park PS	Cd & Hg	DEQ
Existing Grab	WTP Residuals Pond Outfall	Required Permit Sampling for ARG640085 (includes TSS, Diss. Al, and TRC)	ESC
5	WTP Residuals Pond Outfall	Cd & Hg	AIC
	WTP Residuals Pond Outfall	Cd & Hg	ESC
	WTP Residuals Pond Outfall	Cd & Hg	DEQ

- Existing Permit Sampling by ESC will continue unchanged using the existing sampling equipment

5 Auto-Samplers will be furnished and set-up by AIC for the additional testing specified in this sampling plan:

- 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 ~~using a sludge judge to reach out into the pond for a representative sample.~~

- 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. The composite samples will be pulled from the PS below the scum and grease layer. An additional grab sample will be pulled directly from the PS using a sludge judge to sample the scum and grease layer. The grab sample of the sucm and grease layer will be collected each time the composite sample is collected from the automatic sampler.

- 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.

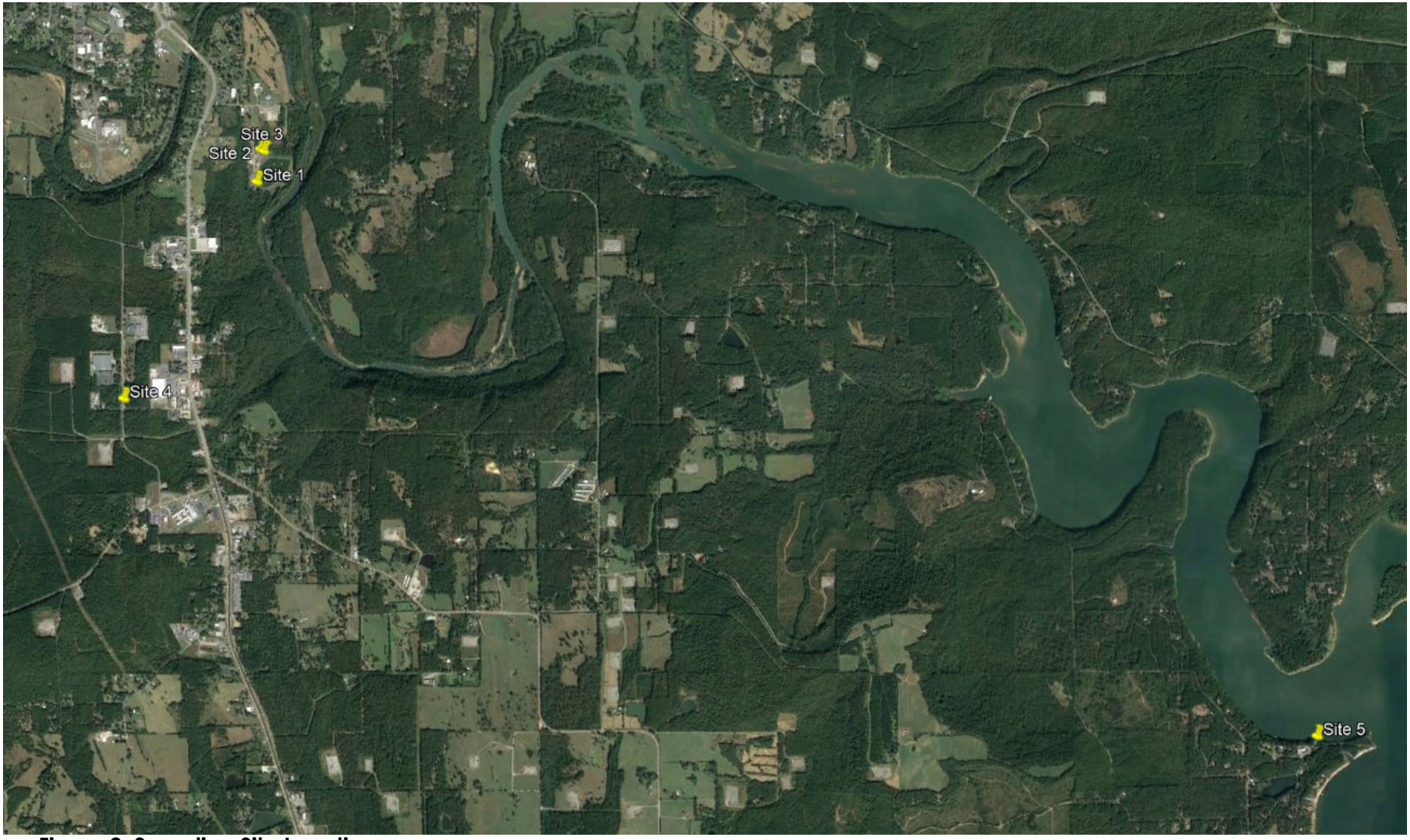

Figure 2: Sampling Site Locations

Figure 3: Sampling Site Locations at WWTP

Analytes and Field Measurements

Analyte Summary Table

Analyte	Lab Method	MDL	Permit Criteria	Sites Analyzed	Blank Requirements
Cd (TR)	EPA 200.8	0.5 µg/L	2.01 µg/L (AR0048836)	All Sites (1-5)	Field & Trip
Hg (TR)	EPA 1631.E	0.2 ng/L	Report (AR0048836)	All Sites (1-5)	Field & Trip
TSS	SM 2540.D	1.0 mg/L	15.0 mg/L (AR0048836)	All Sites (1-5)	Field & Trip
CBOD	SM 5210.B	2.0 mg/L	7.0 mg/L (AR0048836)	1, 2, & 3	Field & Trip
TKN	SM 4500.N	0.1 mg/L	-	1, 2, & 3	Field & Trip
NH3-N	SM 4500	0.1 mg/L	2.1 mg/L (AR0048836)	1, 2, & 3	Field & Trip
TP	EPA 365.3	0.01 mg/L	Report (AR0048836)	1, 2, & 3	Field & Trip
COD	SM 5220.C	20 mg/L	-	1, 2, & 3	Field & Trip
O&G	EPA 1664.A	1.4 mg/L	-	1, 2, & 3	Field & Trip
Diss. Al	EPA 200.7	50 µg/L	1.0 mg/L (ARG640085)	5	Field & Trip
TRC	SM 4500.Cl-G	10 µg/L	0.011 mg/L (ARG640085)	5	Field & Trip

Field Measurements

In addition to Sample ID, date and time of collection, other field measurements should also be recorded. The table below shows the field measurements that are to be recorded when each sample is collected at the representative sites.

Site	Field Measurement
1	Weather Conditions, WWTP Effluent Flow
2	Weather Conditions, WWTP Effluent Flow
3	Weather Conditions, WWTP Effluent Flow
4	Weather Conditions
5	Weather Conditions, Backwash Pond Effluent Flow

Sampling Schedule

The sampling schedule for each lab is shown below by site. The sampling will be scheduled for a total of 6 weeks. This will result in the analysis of 18 samples (of Cd & Hg) from each site, from each lab, for a total of 90 samples for Total Recoverable Cadmium and Mercury. AIC Labs will be tasked with retrieving the 24-hour 2.5 gallon composite from the five (5) automatic samplers and preparing the duplicate sample bottles for each lab, using Clean Sampling Techniques (EPA Method 1669). AIC Labs personnel will transport the samples assigned to their lab for analysis. The other lab samples (ESC & DEQ Labs) will be prepared by AIC and delivered to the Owner (Clinton Water) for immediately delivery to the ESC & DEQ Labs for duplicate analysis.

ESC Labs – Sampling Schedule			
Site #	**Site**	**Parameters Analyzed**	**Frequency**
Existing	WWTP Outfall 001	Permit samples (AR0048836)	3/Week
1	WWTP Outfall 001	Cd & Hg (Total Recoverable)	1/Week
2	WWTP Influent	Cd & Hg (Total Recoverable)	1/Week
3	Equalization Lagoon	Cd & Hg (Total Recoverable)	1/Week
4	Industrial Park PS	Cd & Hg (Total Recoverable)	1/Week
Existing	WTP Residuals Pond Outfall	Permit samples (ARG640085)	1/Quarter
5	WTP Residuals Pond Outfall	Cd & Hg (Total Recoverable)	1/Week

AIC Labs – Sampling Schedule			
Site #	**Site**	**Parameters Analyzed**	**Frequency**
1	WWTP Outfall 001	Cd & Hg (Total Recoverable)	1/Week
2	WWTP Influent	BOD, TSS, TKN, TP, Cd, & Hg	1/Week
3	Equalization Lagoon	BOD, TSS, TKN, TP, Cd, & Hg	1/Week
4	Industrial Park PS	TSS, O&G, CBOD, COD, NH3-N, TKN, Cd, & Hg	1/Week
5	WTP Residuals Pond Outfall	Cd &Hg	1/Week

DEQ Labs – Sampling Schedule			
Site #	**Site**	**Parameters Analyzed**	**Frequency**
1	WWTP Outfall 001	Cd & Hg (Total Recoverable)	1/Week
2	WWTP Influent	BOD, TSS, TKN, TP, Cd, & Hg	1/Week
3	Equalization Lagoon	BOD, TSS, TKN, TP, Cd, & Hg	1/Week
4	Industrial Park PS	TSS, O&G, CBOD, COD, NH3-N, TKN, Cd, & Hg	1/Week
5	WTP Residuals Pond Outfall	Cd &Hg	1/Week

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 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).

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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	

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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

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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:

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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).

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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
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FTN Associates, Ltd.
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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	

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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: Environmental Services Co Inc, 13715 W. Markham, Little Rock AR 72211

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)

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

SAMPLE DESCRIPTION

Sample Identification	Date	Time	Matrix* W	S	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)

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

APPENDIX B

ADEQ PHONE CALL RECORD

ADEQ

ARKANSAS
Department of Environmental Quality

PHONE CALL

To:	From:	Date: 8/25/2015
Isaac Keeling	Guy Lester	Time: 9:03 AM

Subject: Issues with City of Clinton – WWTfs permit renewals

Summary of Communication:

Spoke with Mr. Keeling concerning issues with the renewal of the City of Clinton WWTFs permits.

1. Both facilities are included in the Mercury in Fish Tissue TMDL for the Little Red River, so the renewal is on HOLD until everything is worked out with the TMDL.
2. 2 of the 3 Mercury samples for the East facility were high, and 1 was non-detect. This implies that the samples may have been contaminated. I told Mr. Keeling that he has the option of re-sampling using clean sampling techniques to determine if there are actually high levels of Mercury in the effluent. All samples will then be evaluated to determine whether or not they are representative of the discharge.
3. Cadmium was also detected in the discharge, but not above the WQS. However, the 3 data points show RP because of the limited data multiplier.
4. The facility must have the capability to send water from the sludge storage pond back to the headworks of the treatment plant, or a separate permit will be required.
5. Sludge depth in sludge pond needs to be determined. Mr. Keeling said that the pond level was low several years back and that sludge level was also low.
6. Mr. Keeling's email address has been cancelled due to changes at the local ISP.

Conclusions, Actions Taken or Required:

1. None.
2. If additional Mercury data are submitted, all Mercury data will be evaluated to determine whether or not they are representative of the discharge.
3. Additional samples collected for Mercury may also be tested for Cadmium. As with Mercury, all Mercury data will be evaluated to determine whether or not they are representative of the discharge.
4. Information will be submitted about pumping sludge pond water to headworks.
5. Information concerning the depth of sludge in the sludge pond needs to be submitted. This may be documentation from the time the water level in the pond was low, or actual sludge depth measurements.
6. Mr. Keeling will send me an email from his new email address as soon as he gets it. I will then send him an email documenting our conversation.

APPENDIX C

DEQ Labs Contact Information

& Chain of Custody Forms

kbreckenridge@saltengineers.com

From: Stacie Wassell (adpce.ad) <wassell@adeq.state.ar.us>
Sent: Friday, September 9, 2022 12:12 AM
To: 'kbreckenridge@saltengineers.com'; Lessie Redican (adpce.ad)
Cc: Guy Lester (adpce.ad); Leslie Allen-Daniel (adpce.ad); 'William Hinchey'; 'CLINTON WATER DEPT.'; Richard Healey (adpce.ad)
Subject: RE: Clinton Sampling Plan
Attachments: DEQ COC Ver 2.pdf

Kyle,
Please contact me and Lessie Redican regarding samples to be run by the DEQ laboratory. I have included Lessie on this email so you will have her email address.
Make sure a complete chain-of-custody accompanies each set of samples. I am attaching an E&E COC that may be used for the DEQ samples.
Please let me know if you have any questions.

Stacie R. Wassell | Deputy Associate Director
Arkansas Energy and Environment
Division of Environmental Quality | **Office of Water Quality**
5301 Northshore Drive | North Little Rock, AR 72118-5317
501.682.0886 | wassell@adeq.state.ar.us | lessie.redican@adeq.state.ar.us

ARKANSAS ENERGY & ENVIRONMENT

From: Guy Lester (adpce.ad)
Sent: Thursday, September 8, 2022 1:11 PM
To: Leslie Allen-Daniel (adpce.ad); 'William Hinchey'; 'CLINTON WATER DEPT.'; Richard Healey (adpce.ad); Stacie Wassell (adpce.ad)
Subject: FW: Clinton Sampling Plan

See Kyle's response below.

Guy Lester, P.E. | Permit Engineer
Division of Environmental Quality | **Office of Water Quality**
NPDES Permits Section
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.519.0304 | e: lester@adeq.state.ar.us

ARKANSAS
ENERGY & ENVIRONMENT

From: kbreckenridge@saltengineers.com [mailto:kbreckenridge@saltengineers.com]
Sent: Thursday, September 8, 2022 1:13 PM
To: Guy Lester (adpce.ad)
Subject: RE: Clinton Sampling Plan

Not a problem – just asking based on the logistics of having the samples picked up vs. Owner or other lab having to deliver. Filling separate sample bottles would also eliminate the potential of contamination during splitting.

We'll collect a large composite at each site and have American Interplex split the samples using clean sampling techniques.

Thanks,

C. Kyle Breckenridge, P.E., BCEE
kbreckenridge@saltengineers.com
cell: 501-766-9832

SALT
ENGINEERS & PLANNERS

From: Guy Lester (adpce.ad) <Guy.Lester@adeq.state.ar.us>
Sent: Thursday, September 8, 2022 12:58 PM
To: 'kbreckenridge@saltengineers.com' <kbreckenridge@saltengineers.com>; Leslie Allen-Daniel (adpce.ad) <Leslie.Allen-Daniel@adeq.state.ar.us>
Cc: 'William Hinchey' <clintonwater9@gmail.com>; 'CLINTON WATER DEPT.' <clintonwater2@gmail.com>; Richard Healey (adpce.ad) <Richard.Healey@adeq.state.ar.us>; Stacie Wassell (adpce.ad) <wassell@adeq.state.ar.us>
Subject: RE: Clinton Sampling Plan

Would there be a problem with collecting one large sample, then splitting it into separate bottles for each lab? That's the definition of a split-sample. As long as clean sampling techniques are sued, I don't see a problem.

Guy Lester, P.E. | Permit Engineer
Division of Environmental Quality | Office of Water Quality
NPDES Permits Section
5301 Northshore Drive | North Little Rock, AR 72118
t: 501.519.0304 | e: lester@adeq.state.ar.us

ARKANSAS
ENERGY & ENVIRONMENT

From: kbreckenridge@saltengineers.com [mailto:kbreckenridge@saltengineers.com]
Sent: Thursday, September 8, 2022 10:04 AM
To: Leslie Allen-Daniel (adpce.ad)
Cc: 'William Hinchey'; 'CLINTON WATER DEPT.'; Richard Healey (adpce.ad); Guy Lester (adpce.ad); Stacie Wassell (adpce.ad)
Subject: RE: Clinton Sampling Plan

Leslie,

Sorry to keep bugging you on this – but do you have any feedback regarding the email below. I'll need to get the sampling plan revised according to that feedback and then approved, before Clinton can get the equipment rented and labs on schedule for the sampling.

Also please let us know who to coordinate with for the DEQ lab duplicate analysis.

Thanks,

C. Kyle Breckenridge, P.E., BCEE
kbreckenridge@saltengineers.com
cell: 501-766-9832
SALT
ENGINEERS & PLANNERS

From: kbreckenridge@saltengineers.com <kbreckenridge@saltengineers.com>
Sent: Thursday, September 1, 2022 1:42 PM
To: 'Allen-Daniel, Leslie' <ALLEN-DANIEL@adeq.state.ar.us>
Cc: 'William Hinchey' <clintonwater9@gmail.com>; 'CLINTON WATER DEPT.' <clintonwater2@gmail.com>; 'Healey, Richard' <HEALEYR@adeq.state.ar.us>; lester@adeq.state.ar.us; wassell@adeq.state.ar.us
Subject: RE: Clinton Sampling Plan

Thanks – yes that answers it.

That being the case - I suppose Clinton will rent the other 4 samplers. Would it be acceptable to use 4, 1-gallon bottles for collection? That way one will go to ESC, one to American Interplex, and one to the ADEQ lab.
The caveat is – under a multiple bottle scenario – I believe the sampler will only fill them sequentially. That way - all labs would receive samples collected the same day but they would have been filled at different hour ranges. Alternatively, if we do a single bottle composite, the labs will have to sample from different days or someone will have to prepare (subdivide) triplicate field samples onsite.

I'm assuming you still want the ADEQ lab to run the analyses as well – like was mentioned in our meeting at the ADEQ office.

If you can give some guidance on the above, I will finalize the sampling plan and get it back to you. I'm also going to add the requirement for field and trip blanks.

Thanks,

C. Kyle Breckenridge, P.E., BCEE
kbreckenridge@saltengineers.com
cell: 501-766-9832
SALT
ENGINEERS & PLANNERS

From: Allen-Daniel, Leslie <ALLEN-DANIEL@adeq.state.ar.us>
Sent: Thursday, September 1, 2022 1:17 PM
To: 'kbreckenridge@saltengineers.com' <kbreckenridge@saltengineers.com>
Subject: RE: Clinton Sampling Plan

Hi Kyle,

I understand the need for clarification. The samples should all be composite as this is what the permit requires. They need to do the sampling as much like the permit as possible to eliminate any unknown causes and to try and pinpoint the source/problem. Does that help?

Let me know if you have additional questions.

Thanks,

Leslie Allen-Daniel | Enforcement Coordinator
Division of Environmental Quality | Office of Water Quality
Enforcement Branch
5301 Northshore Drive, North Little Rock, AR 72118
t: 501.682.0630 | e: allen-daniel@adeq.state.ar.us
ARKANSAS
ENERGY & ENVIRONMENT

From: kbreckenridge@saltengineers.com [mailto:kbreckenridge@saltengineers.com]
Sent: Tuesday, August 30, 2022 5:01 PM
To: Allen-Daniel, Leslie
Cc: Healey, Richard; Lester, Guy; Wassell, Stacie; 'William Hinchey'
Subject: Clinton Sampling Plan

Leslie,

On the comments for the Sampling Plan it states that all Cd and Hg samples must be composites and refers to the permit. Does that statement indicate that all Cd and Hg from ALL sites must be composite or does it only refer to the permitted outfall sample. There is an existing composite sampler set up there – so that's no problem- it will be composite. However, if all sites need composite samples for Cd and Hg – then we'll have to add four composite samplers, one each for the other sites.

Could you please clarify?

Thanks,

C. Kyle Breckenridge, P.E., BCEE
kbreckenridge@saltengineers.com
cell: 501-766-9832

SALT
ENGINEERS & PLANNERS

ARKANSAS DEPARTMENT OF ENERGY & ENVIRONMENT, DIVISION OF ENVIRONMENTAL QUALITY
CHAIN-OF-CUSTODY

Date		Sampler (print)	
Site Identification			
Site Address			

Sample ID	Sample Remarks	Time (hhmm)	Latitude	Longitude	Lab ID

Lab Use Only: Custody seal on each container?: YES NO Labels/COC agree?: YES NO

Date/Time	**Relinquished By**	**Received By**
Date	Name/Title	Name/Title
Time	Signature	Signature
Date	Name/Title	Name/Title
Time	Signature	Signature
Date	Name/Title	Name/Title
Time	Signature	Signature
Date	Name/Title	Name/Title
Time	Signature	Signature