ADEQ
ARKANSAS
Department of Environmental Quality

April 5, 2019

David Duch, Mayor
City of Hazen
P.O. Box 564
Hazen, AR 72064

RE: City of Hazen WWTP Inspection
AFIN: 59-00029 Permit No.: AR0022411

Dear Mayor Duch:

On March 6 and 27, 2019, I performed a Compliance Sampling Inspection and a Collection System Evaluation of the above referenced facility in accordance with the provisions of the Federal Clean Water Act, the Arkansas Water and Air Pollution Control Act, and the regulations promulgated thereunder. A copy of the inspection report is enclosed for your records.

No violations were noted at the time of the inspection. Please refer to the attached inspection report for any comments. If I can be of any assistance, please contact me at Bolenbaugh@adeq.state.ar.us or 501-682-0659.

Sincerely,

Jason Bolenbaugh
Compliance Branch Manager
Office of Water Quality

ADEQ
ARKANSAS
Department of Environmental Quality

WATER DIVISION INSPECTION REPORT

AFIN: **59-00029** | PERMIT #: **AR0022411** | DATE: **3/6/2019**

COUNTY: **59 Prairie** | PDS #: **107298** | MEDIA: **WN**

GPS LAT: **34.78888** LONG: **-91.56194** LOCATION: **Outfall**

FACILITY INFORMATION

NAME:
City of Hazen WWTP
LOCATION:
1789 Utility St.
CITY:
Hazen

RESPONSIBLE OFFICIAL

NAME: / TITLE
David Duch / Mayor
COMPANY:
City of Hazen
MAILING ADDRESS:
P.O. Box 564
CITY, STATE, ZIP:
Hazen AR 72064
PHONE & EXT: / FAX:
870-255-4521 /
EMAIL:
hazengas@cityofhazen.org

CONTACTED DURING INSPECTION: **No**

INSPECTION INFORMATION

FACILITY TYPE: **1 - Municipal**
INSPECTOR ID#: **83321 S - State**
FACILITY EVALUATION RATING: **4 - Satisfactory**
INSPECTION TYPE: **Compliance Sampling**

DATE(S):	ENTRY TIME:	EXIT TIME:
3/6/2019	**09:00**	**10:50**
3/27/2019	**08:30**	**09:20**

PERMIT EFFECTIVE DATE: **8/1/2014**
PERMIT EXPIRATION DATE: **7/31/2019**

FAYETTEVILLE SHALE RELATED: **N**

FAYETTEVILLE SHALE VIOLATIONS: **N**

INSPECTION PARTICIPANTS

NAME/TITLE/PHONE/FAX/EMAIL/ETC.:
Blain Sanders, Inspector, ADEQ
Mason Martin, Class II Operator, City of Hazen
Drew Waters, Inspector, ADEQ

AREA EVALUATIONS

(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Applicable/Evaluated)

S	PERMIT	**S**	FLOW MEASUREMENT	**N**	STORMWATER
S	RECORDS/REPORTS	**N**	LABORATORY	**S**	FACILITY SITE REVIEW
S	OPERATION & MAINTENANCE	**S**	EFFLUENT/RECEIVING WATER	**S**	SELF-MONITORING PROGRAM
S	SAMPLING	**N**	SLUDGE HANDLING/DISPOSAL	**N**	PRETREATMENT
****	OTHER:				

SUMMARY OF FINDINGS

The following results were obtained from the effluent samples collected on March 27, 2019. All parameters were within the permit effluent limitation outlined in Part 1, Section A or the permit.

	Mass (lbs/day)	Concentration (mg/L)	MGD
Flow			0.377
CBOD5	4.06	1.29	
TSS	27.51	8.75	
NH3-N	1.45	0.46	
FCB		660 (col/100ml)	
DO		7.95 (mg/L)	
pH		7.02 s.u.	

No violations were noted during the inspection. No further actions are required by the City of Hazen at this time. The Department appreciates the City of Hazen's cooperation during the site visits.

GENERAL COMMENTS
The type of treatment at the plant consist of sedimentation (primary clarification), extended aeration activated sludge, secondary clarification, and UV disinfection. **The design flow for the plant is 0.275 MGD. During a review of Discharge Monitoring Reports (DMRs) from January 1, 2016 through December 31, 2018, the city reported Daily Maximum Flows that exceeded the design flow for 32 of the 36 reporting months. Exceedances ranged from 0.278 MGD to 1.445 MGD. The City does have some problems with Inflow/Infiltration during rain events but the additional amount of water that enters the system is seen at the treatment plant. The additional flows have not resulted in increased Sanitary Sewer Overflows.** **A review of Discharge Monitoring Reports (DMRs) from January 1, 2016 through December 31, 2018 revealed the city reported 6 effluent violations (4 TSS, 2 FCB). However, the Enforcement Branch reported the city has not submitted the necessary Non-Compliance Reports (NCR) as required under Part III, Section D7 of the permit. Please ensure the necessary NCR are submitted whenever a violation of the permits effluent limitations occurs.** **The last Compliance Evaluation Inspection of the facility was conducted on January 31, 2012. The inspection noted an unpermitted outfall at the sludge wasting lagoon; the clarifier weirs needed cleaned; the city only had a Class I operator; and, regular calibration checks of the plants flow meter were not being conducted. The city submitted all corrective actions and the case were closed on March 23, 2012. The City currently has three Class II operators. The operations and maintenance of the plant were very good. We would like to thank Mr. Martin for his time and effort in maintaining the treatment plant.**

INSPECTOR'S SIGNATURE:	←Click text to left to add signature **-Inspector Name**	DATE:
SUPERVISOR'S SIGNATURE:	 **Jason Bolenbaugh**	DATE: **4/4/2019**

SECTION A: PERMIT VERIFICATION	
PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS	☑S ☐M ☐U ☐NA ☐NE
DETAILS:	
1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE:	☑Y ☐N ☐NA ☐NE
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES:	☐Y ☐N ☐NA ☑NE
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT:	☑Y ☐N ☐NA ☐NE
4. ALL DISCHARGES ARE PERMITTED:	☑Y ☐N ☐NA ☐NE

SECTION B: RECORDKEEPING AND REPORTING EVALUATION	
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT	☑S ☐M ☐U ☐NA ☐NE
DETAILS:	
1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRS:	☑Y ☐N ☐NA ☐NE
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE:	☑S ☐M ☐U ☐NA ☐NE
a. DATES AND TIME(S) OF SAMPLING:	☑Y ☐N ☐NA ☐NE
b. EXACT LOCATION(S) OF SAMPLING:	☑Y ☐N ☐NA ☐NE
c. NAME OF INDIVIDUAL PERFORMING SAMPLING:	☑Y ☐N ☐NA ☐NE
d. ANALYTICAL METHODS AND TECHNIQUES:	☑Y ☐N ☐NA ☐NE
e. RESULTS OF CALIBRATIONS:	☑Y ☐N ☐NA ☐NE
f. RESULTS OF ANALYSES:	☑Y ☐N ☐NA ☐NE
g. DATES AND TIMES OF ANALYSES:	☑Y ☐N ☐NA ☐NE
h. NAME OF PERSON(S) PERFORMING ANALYSES:	☑Y ☐N ☐NA ☐NE
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE:	☐S ☐M ☐U ☑NA ☐NE
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR:	☐S ☐M ☐U ☐NA ☑NE
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA:	☑Y ☐N ☐NA ☐NE

SECTION C: OPERATIONS AND MAINTENANCE	
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED	☐S ☑M ☐U ☐NA ☐NE
DETAILS:	
1. TREATMENT UNITS PROPERLY OPERATED:	☑S ☐M ☐U ☐NA ☐NE
2. TREATMENT UNITS PROPERLY MAINTAINED:	☑S ☐M ☐U ☐NA ☐NE
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED: **The plant does not have standby power. The city has one portable generator. The plant is visited seven days a week by staff.**	☐S ☑M ☐U ☐NA ☐NE
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE: **No alarms are at the plant. The plant is visited seven days a week and no failures have been reported.**	☐S ☐M ☐U ☐NA ☑NE
5. ALL NEEDED TREATMENT UNITS IN SERVICE:	☑S ☐M ☐U ☐NA ☐NE
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED: **Phillip Foot, Chad Swaim, and Mason Martin all possess Class II wastewater operator's licenses.**	☑S ☐M ☐U ☐NA ☐NE
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED:	☑S ☐M ☐U ☐NA ☐NE
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE:	☑Y ☐N ☐NA ☐NE
9. STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED:	☐Y ☐N ☐NA ☑NE
10. PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED:	☐Y ☐N ☐NA ☑NE
11. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR:	☐Y ☑N ☐NA ☐NE
12. IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED:	☐Y ☐N ☑NA ☐NE
13. HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS:	☐Y ☐N ☑NA ☐NE
14. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT:	☐Y ☑N ☐NA ☐NE
15. IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT:	☐Y ☐N ☑NA ☐NE

SECTION D: SAMPLING	
PERMITTEE SAMPLING MEETS PERMIT REQUIREMENTS	☑S ☐M ☐U ☐NA ☐NE
DETAILS:	
1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT:	☑Y ☐N ☐NA ☐NE
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES:	☑Y ☐N ☐NA ☐NE
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT:	☐Y ☐N ☑NA ☐NE
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT:	☑Y ☐N ☐NA ☐NE
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT:	☑Y ☐N ☐NA ☐NE
6. SAMPLE COLLECTION PROCEDURES ADEQUATE:	☑Y ☐N ☐NA ☐NE
a. SAMPLES REFRIGERATED DURING COMPOSITING:	☐Y ☐N ☑NA ☐NE
b. PROPER PRESERVATION TECHNIQUES USED:	☑Y ☐N ☐NA ☐NE
c. CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136:	☑Y ☐N ☐NA ☐NE
7. IF MONITORING IS PERFORMED MORE OFTEN THAN REQUIRED ARE RESULTS REPORTED ON THE DMR:	☐Y ☐N ☑NA ☐NE

SECTION E: FLOW MEASUREMENT	
PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS	☑S ☐M ☐U ☐NA ☐NE
DETAILS: **Permit requires instantaneous flow measurement**	
1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED:__ TYPE OF DEVICE: **6" Parshall Flume**	☑Y ☐N ☐NA ☐NE
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED:	☑Y ☐N ☐NA ☐NE
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED: **Greyline Instruments, SLT 32 Level & Flow Monitor**	☑Y ☐N ☐NA ☐NE
4. CALIBRATION FREQUENCY ADEQUATE: **Last calibrated by EPIC on October 5, 2018.**	☑Y ☐N ☐NA ☐NE
5. RECORDS MAINTAINED OF CALIBRATION PROCEDURES:	☑Y ☐N ☐NA ☐NE
6. CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE:	☑Y ☐N ☐NA ☐NE
7. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE:	☑Y ☐N ☐NA ☐NE
8. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES:	☑Y ☐N ☐NA ☐NE
9. HEAD MEASURED AT PROPER LOCATION:	☑Y ☐N ☐NA ☐NE

SECTION F: LABORATORY	
PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS	☑S ☐M ☐U ☐NA ☐NE
DETAILS:	
1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(B) FOR SLUDGES) :	☑Y ☐N ☐NA ☐NE
2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED:	☐Y ☐N ☑NA ☐NE
3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT:	☐Y ☐N ☐NA ☑NE
4. QUALITY CONTROL PROCEDURES ADEQUATE:	☑Y ☐N ☐NA ☐NE
5. DUPLICATE SAMPLES ARE ANALYZED ≥10% OF THE TIME:	☑Y ☐N ☐NA ☐NE
6. SPIKED SAMPLES ARE ANALYZED ≥10% OF THE TIME:	☑Y ☐N ☐NA ☐NE
7. COMMERCIAL LABORATORY USED:	☑Y ☐N ☐NA ☐NE
a. LAB NAME: **McClelland Consulting Engineers, Inc.**	
b. LAB ADDRESS:	
c. PARAMETERS PERFORMED: **NH3-N, CBOD, DO, FCB, pH, Temp, TSS**	
8. BIOMONITORING PROCEDURES ADEQUATE:	☐Y ☐N ☑NA ☐NE
a. PROPER ORGANISMS USED:	☐Y ☐N ☑NA ☐NE
b. PROPER DILUTION SERIES FOLLOWED:	☐Y ☐N ☑NA ☐NE
c. PROPER TEST METHODS AND DURATION:	☐Y ☐N ☑NA ☐NE
d. RETESTS AND/OR TRE PERFORMED AS REQUIRED:	☐Y ☐N ☑NA ☐NE

SECTION G: EFFLUENT/RECEIVING WATERS OBSERVATIONS

BASED ON VISUAL OBSERVATIONS ONLY — ☑S ☐M ☐U ☐NA ☐NE

DETAILS:

OUTFALL #:	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOATING SOLIDS	COLOR	OTHER
001	None	None	None	None	None	CLEAR	--

SECTION H: SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS — ☐S ☐M ☐U ☐NA ☑NE

DETAILS: **There were no apparent issues with sludge.**

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY: ☐S ☐M ☐U ☐NA ☑NE
2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503: ☐S ☐M ☐U ☐NA ☑NE
3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: (E.G., FOREST, AGRICULTURAL, PUBLIC CONTACT SITE):

SECTION I: SAMPLING INSPECTION PROCEDURES

SAMPLE RESULTS WITHIN PERMIT REQUIREMENTS — ☑S ☐M ☐U ☐NA ☐NE

DETAILS:

1. SAMPLES OBTAINED THIS INSPECTION: ☑Y ☐N ☐NA ☐NE
2. TYPE OF SAMPLE: ☑GRAB:__ ☐COMPOSITE:__ METHOD:__ FREQUENCY: **Once**
3. SAMPLES PRESERVED: **See attached Chain-of-Custody.** ☑Y ☐N ☐NA ☐NE
4. FLOW PROPORTIONED SAMPLES OBTAINED: ☐Y ☑N ☐NA ☐NE
5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE: ☐Y ☑N ☐NA ☐NE
6. SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE: ☑Y ☐N ☐NA ☐NE
7. SAMPLE SPLIT WITH PERMITTEE: ☐Y ☑N ☐NA ☐NE
8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED: **Included with this report.** ☑Y ☐N ☐NA ☐NE
9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT: **Per requires sampling twice per month, but only one sample was collected for this CSI.** ☐Y ☑N ☐NA ☐NE

SECTION J: STORM WATER POLLUTION PREVENTION PLAN

STORM WATER MANAGEMENT MEETS PERMIT REQUIREMENTS — ☐S ☐M ☐U ☑NA ☐NE

DETAILS:

1. SWPPP UPDATED AS NEEDED:__ DATE OF LAST UPDATE: ☐Y ☐N ☑NA ☐NE
2. SITE MAP INCLUDING ALL DISCHARGES AND SURFACE WATERS: ☐Y ☐N ☑NA ☐NE
3. POLLUTION PREVENTION TEAM IDENTIFIED: ☐Y ☐N ☑NA ☐NE
4. POLLUTION PREVENTION TEAM PROPERLY TRAINED: ☐Y ☐N ☑NA ☐NE
5. LIST OF POTENTIAL POLLUTANT SOURCES: ☐Y ☐N ☑NA ☐NE
6. LIST OF POTENTIAL SOURCES AND PAST SPILLS AND LEAKS: ☐Y ☐N ☑NA ☐NE
7. ALL NON-STORM WATER DISCHARGES ARE AUTHORIZED: ☐Y ☐N ☑NA ☐NE
8. LIST OF STRUCTURAL BMPS: ☐Y ☐N ☑NA ☐NE
9. LIST OF NON-STRUCTURAL BMPS: ☐Y ☐N ☑NA ☐NE
10. BMPS PROPERLY OPERATED AND MAINTAINED: ☐Y ☐N ☑NA ☐NE
11. INSPECTIONS CONDUCTED AS REQUIRED: ☐Y ☐N ☑NA ☐NE

FLOW CALCULATION SHEET

Date:	**3/27/2019**	Time:	**~08:40**	
Head in Inches:	**5”**	Feet:	**0.42**	= 0.3380 MGD

Type & Size of Primary Flow Measurement Device: 6” Parshall Flume

Name & Model of Secondary Flow Measurement Device:	Greyline Instruments SLT 32 Level and Flow Monitor
Date of last Calibration of Secondary Flow Device:	10/5/2018
Recorded Flow at Date & Time Listed Above:	**0.318** (Facility Flow Meter)
Calculated Flow at Date & Time Listed Above:	**0.3380**

(Flow is calculated using flow charts in: ISCO Open Channel Flow Measurement Handbook-5th Edition)

$$\%\ \text{Error} = \frac{\text{Recorded Value} - \text{Calculated Value}}{\text{Calculated Value}} \times 100$$

$$\%\ \text{Error} = \frac{0.318 - 0.3380}{0.3380} \times 100$$

$$\%\ \text{Error} = \frac{-0.02}{0.3380} \times 100$$

$$\%\ \text{Error} = -0.059 \times 100$$

$$\%\ \text{Error} = \textbf{-5.9}\ \%$$

Comments: **Within the ±10% as outlined in Part III, Section C.2 of the permit.**

DMR Calculation Check

Reporting Period:	**From**	**18**	**1**	**1**	**To**	**18**	**1**	**31**
		Year	**Month**	**Day**		**Year**	**Month**	**Day**

Parameter Checked: **TSS**

	Loading	**Concentration**	
	Mass	**Monthly**	
	Mo. Avg. - lbs/day	**Mo. Avg. - mg/l**	**7-day Avg. - mg/l**
Reported Value:	**7.3**	**5.5**	**7**
Calculated Value:	**7.34**	**5.5**	**7**
Permit Value:	**45.9**	**20**	**30**

If calculated value does not equal reported value, explain:
No errors found.

DMR Calculation Check

Reporting Period:	**From**	**18** (Year)	**5** (Month)	**1** (Day)	**To**	**18** (Year)	**5** (Month)	**31** (Day)

Parameter Checked: NH3-N

	Loading Mass Mo. Avg. - lbs/day	Concentration Monthly Mo. Avg. - mg/l	Concentration Monthly 7-day Avg. - mg/l
Reported Value:	1.5	0.5	0.5
Calculated Value:	1.47	0.46	0.46
Permit Value:	11.5	5	7.5

If calculated value does not equal reported value, explain:
No errors found.

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:20**
Witness:				Photo #:	**1**
Description:	**Bar screen with well-maintained and operated auger.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:22**
Witness:				Photo #:	**2**
Description:	**Bar screen waste receptacle.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:22**
Witness:				Photo #:	**3**
Description:	**Additional bar screen following bar screen/auger solids separation.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:22**
Witness:				Photo #:	**4**
Description:	**Trash receptacle for any additional solids removed from bar screen.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:22**
Witness:				Photo #:	**5**
Description:	**Activated sludge pond.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:23**
Witness:				Photo #:	**6**
Description:	**Influent flow into activated sludge pond following bar screen.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:24**
Witness:				Photo #:	**7**
Description:	**Series of blowers in the activated sludge pond.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:25**
Witness:				Photo #:	**8**
Description:	**Clarifier with duckweed present.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:25**
Witness:				Photo #:	**9**
Description:	**Clarifier weir trough in good condition.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:28**
Witness:				Photo #:	**10**
Description:	**Settling pond following activated sludge pond and clarifier.**				

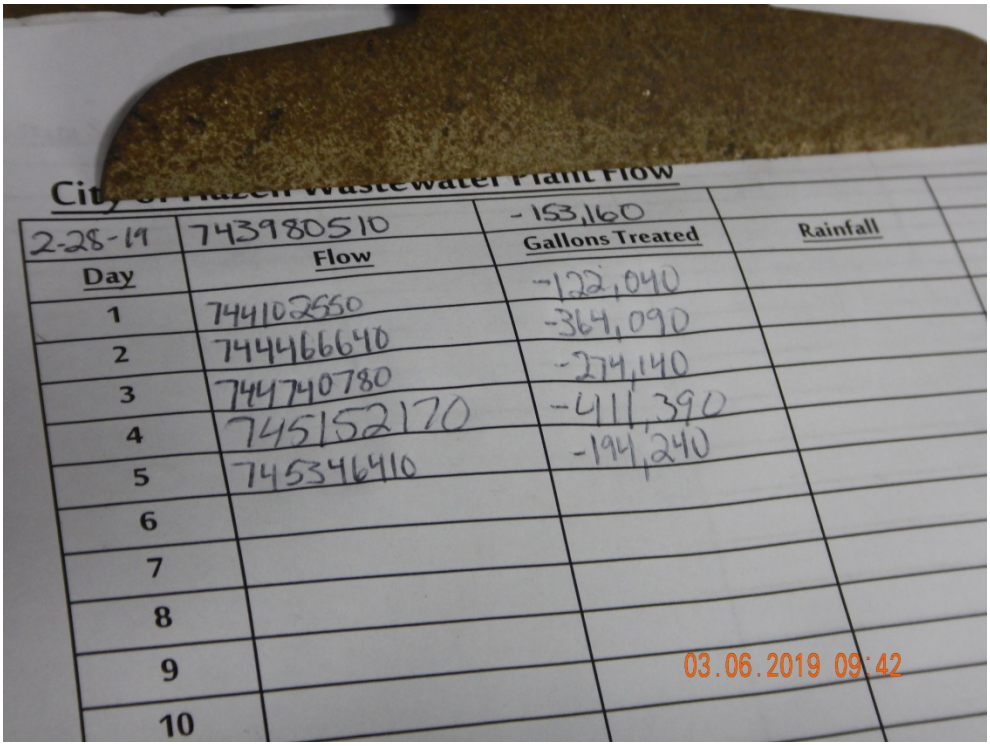
Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:29**
Witness:				Photo #:	**11**
Description:	**Settling pond with one air line and a curtain.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:34**
Witness:				Photo #:	**12**
Description:	**UV system removed and clean and well maintained.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:37**
Witness:				Photo #:	**13**
Description:	**Replacement bulbs for the UV system.**				

Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:38**
Witness:				Photo #:	**14**
Description:	**Totalized flow meter.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**09:42**
Witness:				Photo #:	**15**
Description:	**Flow records being maintained for the month of March.**				



Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**10:12**
Witness:				Photo #:	**16**
Description:	**6-inch Parshall Flume.**				

Water Division Photographic Evidence Sheet					
Location:	**City of Hazen WWTP**				
Photographer:	**Jason Bolenbaugh**	Date:	**3/6/2019**	Time:	**10:02**
Witness:				Photo #:	**17**
Description:	**Discharge from outfall into receiving stream.**				

Analytical Results

Report Date: April 4, 2019

Lab Contact Info:

ADEQ Laboratory and Monitoring Services
5301 Northshore Drive, North Little Rock, AR 72118
www.adeq.state.ar.us

Lessie Redican
Redican@adeq.state.ar.us
501-682-0937

Collector: Bolenbaugh, Jason

Project: CSI

Project Description: City of Hazen WWTP CSI 2019 0999

Date and Time Received: 03/27/2019 12:05

Work Order Number: WO-190327-06

Sample Receipt Conditions:

Condition	Response	Comment
Is the COC completed properly?	Yes	
Temperature on Receipt	1.8°C	
Received on Ice	Yes	
Containers are Correct	Yes	
Custody Seals	Yes	
COC/Labels Agree	Yes	

Analytical Results

Laboratory Name:	ADEQ Laboratory and Monitoring Services	Email:	Bolenbaugh@adeq.state.ar.us
Contact Name:	Bolenbaugh, Jason	Phone:	501-682-0659
Lab Address:	5301 Northshore Drive North Little Rock, AR 72118	Fax:	

Collector: Bolenbaugh, Jason Site: Hazen - Outfall 001 **Work Order Number: WO-190327-06**

Sample Classification: CSI

Matrix: Water

Sample Barcode: 

Project: CSI

Collected: 3/27/2019 8:55

Sample Number: 2019-0999

5 Day Carbonaceous Biochemical Oxygen Demand **Method: SM 5210 B, 2011** **Analyst: RG**

Aliquot #: 2019-0999-1-01 **Batch Number: AB-190327-019**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Carbonaceous Biological Oxygen Demand	1.29	mg/L		0.20	1	3/27/2019 13:39

Total Suspended Solids **Method: SM 2540 D, 2011** **Analyst: KH**

Aliquot #: 2019-0999-1-02 **Batch Number: AB-190327-013**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Total Suspended Solids	8.75	mg/L		2.00	1	3/27/2019 13:00

Dissolved Oxygen **Method: SM 4500-O G, 2011** **Analyst: JB**

Aliquot #: 2019-0999-1-03 **Batch Number: AB-190401-012**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Dissolved Oxygen	7.95	mg/L			1	3/27/2019 9:00

pH **Method: SM 4500-H+ B, 2000** **Analyst: JB**

Aliquot #: 2019-0999-1-04 **Batch Number: AB-190401-013**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
pH	7.02	units			1	3/27/2019 9:00

Water Temperature **Method: SM 2550 B, 2000** **Analyst: JB**

Aliquot #: 2019-0999-1-05 **Batch Number: AB-190401-014**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Water Temperature	14.0	°C			1	3/27/2019 9:00

Analytical Results

Collector: Bolenbaugh, Jason
Site: Hazen - Outfall 001
Work Order Number: WO-190327-06

Sample Classification: CSI
Project: CSI
Matrix: Water
Collected: 3/27/2019 8:55
Sample Barcode:
Sample Number: 2019-0999

Ammonia Dist **Method: SM 4500-NH3 H, 2011** **Analyst: JR**

Aliquot #: 2019-0999-2-01 **Batch Number: AB-190403-032**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Ammonia as Nitrogen	0.46	mg/L		0.03	1	3/28/2019 15:24

Fecal Coliform **Method: SM 9222 D, 2006** **Analyst: KH**

Aliquot #: 2019-0999-3-01 **Batch Number: AB-190327-040**

Analyte(s)	Result	Units	Q	Reporting Limit	Dilution	Analysis Date and Time
Fecal Coliform by MF	~660	cfu/100ml		10.00	10	3/27/2019 13:18

QUALITY CONTROL REPORT

Project: City of Hazen WWTP CSI 2019 0999 Date and Time Received: 03/27/2019 12:05

Analyte	Units	Method Blank	Reporting Limit	% Recovery LCS/LCSD	Limits	% RPD	Lab Dup Result	Limits	% RPD	% Recovery MS/MSD	Limits	% RPD	Limits	Qualifiers
Total Suspended Solids		**SM 2540 D, 2011**					**Batch #:**	**AB-190327-013**		**Parent Sample:**				
Total Suspended Solids	mg/L	<2.00	2.00	96.0 /	90-110			-		/	-		-	
5 Day Carbonaceous Biochemical Oxygen Demand		**SM 5210 B, 2011**					**Batch #:**	**AB-190327-019**		**Parent Sample:**				
CBOD	mg/L	<0.20	0.20	105.1 /	85-115			-		/	-		-	
Fecal Coliform		**SM 9222 D, 2006**					**Batch #:**	**AB-190327-040**		**Parent Sample:**				
Fecal Coliform by MF	cfu/100ml	<1.00	1.00	Pass	-			-		/	-		-	
Ammonia Dist		**SM 4500-NH3 H, 2011**					**Batch #:**	**AB-190403-032**		**Parent Sample:**	**2019-0999**			
Ammonia Dist as Nitrogen	mg/L	<0.03	0.03	97.0 /	80-120			-		106.0 / 106.0	80-120	0.0	0-20	

FIELD QUALITY CONTROL REPORT

Work Order # **WO-190327-06** **Parent Sample** **2019-0999**

Analyte(s)	Field Dup Result	Units	% RPD	Limits	Batch Number
Aliquot # AB-190327-013 Dup - Field 1		**Parent Aliquot**	2019-0999-1-02		
Total Suspended Solids	9.00	mg/L	2.82	0 - 5	AB-190327-013
Aliquot # AB-190327-019 Dup - Field 1		**Parent Aliquot**	2019-0999-1-01		
Carbonaceous Biological Oxygen Der	1.18	mg/L	8.91	0 - 20	AB-190327-019
Aliquot # AB-190327-040 Dup - Field 1		**Parent Aliquot**	2019-0999-3-01		
Fecal Coliform by MF	~710	cfu/100ml	7.30	0 - 20	AB-190327-040
Aliquot # AB-190401-012 Dup - Field 1		**Parent Aliquot**	2019-0999-1-03		
Dissolved Oxygen	8.02	mg/L	0.88	0 - 20	AB-190401-012
Aliquot # AB-190401-013 Dup - Field 1		**Parent Aliquot**	2019-0999-1-04		
pH	7.05	units	0.43	0 - 20	AB-190401-013
Aliquot # AB-190401-014 Dup - Field 1		**Parent Aliquot**	2019-0999-1-05		
Temperature	14.0	°C	0.00	0 - 20	AB-190401-014
Aliquot # AB-190403-032 Dup - Field 1		**Parent Aliquot**	2019-0999-2-01		
Ammonia Dist as Nitrogen	0.49	mg/L	5.45	0 - 20	AB-190403-032

WO-190327-06

Arkansas Department of Environmental Quality
Chain-of-Custody

Date	3/27/2019	Sampler (print)	Jason Bolenbaugh
Site Identification	City of Hazen Waste Water Treatment Plant		
Site Address	1789 Utility St., Hazen, AR 72064		

Sample ID	Sample Remarks	Time (hhmm)	Latitude	Longitude	Lab ID
Outfall 001		0855	34.78888	-91.56194	2019-0999
Outfall 001 Dup		0855	34.78888	-91.56194	1-0999D

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

Date/Time	Relinquished By	Received By
Date: 3-27-2019	Name/Title: Jason Bolenbaugh/Manager	Name/Title: Chad Carrington / Chemist
Time: 1205	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

Legal COC Form
Revision 001

Effective Date: 04/16/2018

18°C

ADEQ
ARKANSAS
Department of Environmental Quality

Arkansas Department of Environmental Quality
for Compliance, Enforcement, or Emergency Samples

Facility or Project Name	AFIN # / County
City of Hazen WWTP CSI	59-00029

Printed Name of Sampler: Jason Bolenbaugh

Container Type Code	Media Code	Preservation Code
P = Polyethylene/Plastic	W = water	A = Cool to ≤ 6°C
G = Glass	G = groundwater	B = Sulfuric Acid
A = Amber Glass	L = liquid (not water)	C = Nitric Acid
O = Other (Specify)	S = soil or solid	D = NaOH
	E = edible tissue	E = Sodium Thiosulfate
Instantaneous Flow = 0.377	F = whole fish	F = Other (specify)
	B = other	

Sample ID	Date Collected (mm/dd/yy)	Time Collected (hh:mm)	Sample Characteristics: Grab (1) or Composite (2)	Container Type	Media Code	Preservation Type	Parameters Requested: Total No. of Containers: TSS, CBOD	NH3-N	FCB				Field Measurements: Time Analyzed	pH (SU)	DO (mg/L)	Temp (°C)	Latitude (dd.ddddd)	Longitude (dd.ddddd)	Lab #
Outfall 001	03/27/2019	08:55	1	P	W	A	1						09:00	7.02	7.95	14.0	34.78888	-91.56194	-0999
Outfall 001	03/27/2019	08:55	1	P	W	AB		1											
Outfall 001	03/27/2019	08:55	1	P	W	AE			1										
Outfall 001 Dup	03/27/2019	08:55	1	P	W	A	1						09:00	7.05	8.02	14.0	34.78888	-91.56194	-0999D
Outfall 001 Dup	03/27/2019	08:55	1	P	W	AB		1											
Outfall 001 Dup	03/27/2019	08:55	1	P	W	AE			1										

SAMPLE CONDITION UPON RECEIPT IN LAB		
1. Containers Correct	✓ Yes	___ No
2. COC & Labels Agree	✓ Yes	___ No
3. Received On Ice	✓ Yes	___ No
4. Temp (°C) Upon Receipt	1.8 °C	
FOR COMPLETION BY LAB ONLY		

REMARKS / SAMPLE COMMENTS

PRIMARY FLOW DEVICE: 5" > THESE MEASUREMENTS WERE TAKEN AND RECORDED FOR A CALIBRATION CHECK. ACTUAL FLOW DURING SAMPLING IS NOTED ABOVE.
TOTALIZER FLOW: 0.318

Field TRC Measurement (mg/L)
Time Collected:
Time Analyzed:
TRC Result:
TRC Dup Result:

Water Quality Monitoring Dissolved Oxygen and pH Field Meters Calibration Sheet (YSI Meters ONLY)

Sample Collector:	JASON BOLENBAUGH
Sampling Event Name:	CITY OF HAZEN CSI

	pH	Dissolved Oxygen
Meter Model	pH100A	550A
Meter Serial Number	JC03315	08M100456

	Date	Time
Calibration Check	3/27/2019	0828

pH	7.0 Buffer Solution	4.0 Buffer Solution	10.0 Buffer Solution
	Expiration Date: 3/2020	Expiration Date: 3/2020	Expiration Date:
	Lot #: 8GC117	Lot #: 8GC347	Lot #:
	Buffer Temp. (°C): 17.5	Buffer Temp. (°C): 17.5	Buffer Temp. (°C):

	Initial Reading	Calibrated Reading (STAND)	Calibrated Reading (SLOPE)	Calibrated Reading (SLOPE)	Efficiency %	7.0 Buffer Confirmation Check
Calibration Check	7.07	6.88	4.00	—	99.0	6.88

Compliance Branch procedures require pH probes be changed if probe efficiency is less than 90%.
Record maintenance records below and in your field logbook.

≥90%
YES or NO

Dissolved Oxygen	Warm-up Start Time	Warm-up End Time	Altitude (Feet)	Temperature (°C)	Expected % Saturation	Calibrated % Saturation	Expected Concentration (mg/L)	Calibrated Concentration (mg/L)
Calibration Check	0730	0828	300	7.9	98.9	98.9	11.77	11.75

Review operators manual if you circled "NO" for either accuracy check. Record maintenance records below and in your field logbook.

[1]Calibrated % Within ± 2% of Expected
YES or NO

[2]Calibrated Within ± 0.3 of Expected
YES or NO

NOTES:

[1]Review Table 1 to find the Expected Saturation (Correction Factor) at your given Elevation (i.e. at 300 feet elevation the Expected Saturation is 98.9%).

[2]Review Table 2 to find the Expected Concentration at your given Elevation and Meter Temperature (i.e. at 300 feet elevation and 10°C, the Expected Concentration is 11.18 mg/L)

Last Revision Date: October 17, 2018