



8100 National Dr. - Little Rock, AR 72209  
501-455-3233 Fax 501-455-6118

23 July 2019

Jason Bolenbaugh  
ADEQ  
5301 Northshore Dr.  
North Little Rock, AR 72118

Project: Bethel Heights 04-00630  
Project Number: July 2019 -- B.H. Drip Field Sampling  
SDG Number: 1907253

Enclosed are the results of analyses for samples received by the laboratory on 16-Jul-19 15:31. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	3.0°C

Sincerely,

A handwritten signature in blue ink, appearing to read "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

*This document is intended only for the use of the person(s) to whom it is expressly addressed. This document may contain information that is confidential and legally privileged. If you are not the intended recipient, you are notified that any disclosure, distribution, or copying of this document is strictly prohibited. If you have received this document in error, please destroy.*

23 July 2019

Jason Bolenbaugh

ADEQ

5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- B.H. Drip Field Sampling

Date Received: 16-Jul-19 15:31



## CASE NARRATIVE

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Sample Delivery Group –1907253

**One OR more of the qualifiers described below may appear in this report. Qualifiers in RED apply to this SDG (Sample Delivery Group).**

### FECAL COLIFORM QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
FC	The sample result is actually GREATER THAN the 2420 MPN/100 mL. The sample growth exceeded the limit of the procedure.
TNTC	Too Numerous to Count

23 July 2019

Jason Bolenbaugh

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5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- B.H. Drip Field Sampling

Date Received: 16-Jul-19 15:31



## ANALYTICAL RESULTS

Lab Number:		1907253-01				
Sample Name:		BH01				
Date/Time Collected:		7/16/19 10:10				
Sample Matrix:		Water				
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	2.23		7/18/19 10:55	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
E. Coli	MPN/100 mL	496		7/16/19 15:50	B907325	IDEXX ColiIert-18
Fecal Coliforms	MPN/100 mL	TNTC	FC, TNTC	7/16/19 16:36	B907284	IDEXX ColiIert-18

## ANALYTICAL RESULTS

Lab Number:		1907253-02				
Sample Name:		BH03				
Date/Time Collected:		7/16/19 10:41				
Sample Matrix:		Water				
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	17.2		7/18/19 10:59	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
E. Coli	MPN/100 mL	TNTC	FC, TNTC	7/16/19 15:50	B907325	IDEXX ColiIert-18
Fecal Coliforms	MPN/100 mL	TNTC	FC, TNTC	7/16/19 16:36	B907284	IDEXX ColiIert-18

## ANALYTICAL RESULTS

Lab Number:		1907253-03				
Sample Name:		BH04				
Date/Time Collected:		7/16/19 11:02				
Sample Matrix:		Water				
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	10.7		7/18/19 11:03	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
E. Coli	MPN/100 mL	TNTC	FC, TNTC	7/16/19 15:50	B907325	IDEXX ColiIert-18
Fecal Coliforms	MPN/100 mL	TNTC	FC, TNTC	7/16/19 16:36	B907284	IDEXX ColiIert-18

23 July 2019

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5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- B.H. Drip Field Sampling

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## ANALYTICAL RESULTS

Lab Number:	1907253-04					
Sample Name:	BH05					
Date/Time Collected:	7/16/19 11:55					
Sample Matrix:	Water					
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	2.81		7/18/19 11:07	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
E. Coli	MPN/100 mL	41		7/16/19 15:50	B907325	IDEXX Colilert-18
Fecal Coliforms	MPN/100 mL	79		7/16/19 16:36	B907284	IDEXX Colilert-18

## QUALITY CONTROL RESULTS

### Total Metals -- Batch: B907280 (Water)

Prepared: 17-Jul-19 10:50 By: ST -- Analyzed: 18-Jul-19 09:58 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Phosphorus	<0.036 mg/L	98.8% / NA	106% / 104%		1.86%	

### Wet Chemistry -- Batch: B907284 (Water)

Prepared: 16-Jul-19 15:02 By: CJ -- Analyzed: 16-Jul-19 15:02 By: CJ

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Fecal Coliforms	<1 MPN/100 mL	NA / NA	NA / NA	35 MPN/100 mL	26.5%	

### Wet Chemistry -- Batch: B907325 (Water)

Prepared: 16-Jul-19 15:50 By: CJ -- Analyzed: 16-Jul-19 15:50 By: CJ

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
E. Coli	<1 MPN/100 mL	NA / NA	NA / NA	521 MPN/100 mL	4.80%	

## QUALIFIER(S)

\*FC: The sample result is actually GREATER THAN 2420 MPN/100mL. The sample growth exceeded the limit of the procedure.

\*TNTC: Too Numerous To Count

All Analysis performed according to EPA approved methodology when available:

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: *Norma James / Teresa Coins*

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer



ARKANSAS  
Department of Environmental Quality

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



Facility or Project Name		AFIN # / County	
BETHEL HEIGHTS DRIP FIELD SAMPLING		04-00630	
Printed Name of Sampler			
JASON BOLENBARTH			
Sample ID	Date Collected (mm/dd/yy)	Time Collected (hh:mm)	Grab (1) or Composite (2)
BH01	07/16/19	1010	1 P W AE 1
BH01	07/16/19	1010	1 P W AE 1
		7-16-19/1010	1 P W AE 1
BH01	07/16/19	1010	1 P W AE 1
BH03	07/16/19	1041	1 P W AE 1
BH03	07/16/19	1041	1 P W AE 1
BH03	07/16/19	1041	1 P W AE 1
BH04	07/16/19	1102	1 P W AE 1
BH04	07/16/19	1102	1 P W AE 1
BH04	07/16/19	1102	1 P W AE 1
BH05	07/16/19	1155	1 P W AE 1
BH05	07/16/19	1155	1 P W AE 1
BH05	07/16/19	1155	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	8°C		
FOR COMPLETION BY LAB ONLY			
REMARKS / SAMPLE COMMENTS			
Field TRC Measurement (mg/L)			
Time Collected:			
Time Analyzed:			
TRC Result:			
TRC Dup Result:			







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Project: Bethel Heights 04-00630  
Project Number: July 2019 -- Phase 1-3  
SDG Number: 1907254

Enclosed are the results of analyses for samples received by the laboratory on 16-Jul-19 15:29. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	3.0°C

Sincerely,

A handwritten signature in blue ink, reading "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 1-3

Date Received: 16-Jul-19 15:29



## CASE NARRATIVE

---

Sample Delivery Group –1907254

**One OR more of the qualifiers described below may appear in this report. Qualifiers in RED apply to this SDG (Sample Delivery Group).**

### FECAL COLIFORM QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
FC	The sample result is actually GREATER THAN the 2420 MPN/100 mL. The sample growth exceeded the limit of the procedure.
TNTC	Too Numerous to Count



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North Little Rock, AR 72118

Project: Bethel Heights 04-00630

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Date Received: 16-Jul-19 15:29



## ANALYTICAL RESULTS

Lab Number:		1907254-01				
Sample Name:		Phase 2 Dup				
Date/Time Collected:		7/16/19 9:08				
Sample Matrix:		Water				
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Nitrate + Nitrite	mg/L	< 0.500		7/17/19 8:06	[CALC]	EPA 300.0, 2.1-1993
Nitrate as N	mg/L	<b>0.397</b>		7/17/19 8:06	B907257	EPA 300.0, 2.1-1993
Nitrite as N	mg/L	< 0.250		7/17/19 8:06	B907257	EPA 300.0, 2.1-1993
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	<b>7.35</b>		7/18/19 11:10	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	<b>28.0</b>		7/22/19 7:54	B907365	SM 4500-NH3 B,D,C-2011
Fecal Coliforms	MPN/100 mL	TNTC	FC, TNTC	7/16/19 16:36	B907284	IDEXX ColiAlert-18
TKN	mg/L	<b>42.3</b>		7/17/19 11:00	B907270	Hach 10242, Rev. 1.1, 2013
TSS	mg/L	<b>13.5</b>		7/18/19 16:15	B907310	I-3765-85/SM2540 D-2011
CBOD	mg/L	<b>20.0</b>		7/18/19 8:12	B907308	SM 5210 B-2011,Hach 10360

## ANALYTICAL RESULTS

Lab Number:		1907254-02				
Sample Name:		Phase 2				
Date/Time Collected:		7/16/19 9:00				
Sample Matrix:		Water				
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Nitrate + Nitrite	mg/L	< 0.500		7/17/19 8:28	[CALC]	EPA 300.0, 2.1-1993
Nitrate as N	mg/L	<b>0.403</b>		7/17/19 8:28	B907257	EPA 300.0, 2.1-1993
Nitrite as N	mg/L	< 0.250		7/17/19 8:28	B907257	EPA 300.0, 2.1-1993
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	<b>7.07</b>		7/18/19 11:30	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	<b>26.7</b>		7/22/19 7:54	B907365	SM 4500-NH3 B,D,C-2011
Fecal Coliforms	MPN/100 mL	TNTC	FC, TNTC	7/16/19 16:36	B907284	IDEXX ColiAlert-18
TKN	mg/L	<b>38.4</b>		7/17/19 11:00	B907270	Hach 10242, Rev. 1.1, 2013
TSS	mg/L	<b>13.5</b>		7/18/19 16:15	B907310	I-3765-85/SM2540 D-2011
CBOD	mg/L	<b>22.4</b>		7/17/19 7:55	B907268	SM 5210 B-2011,Hach 10360

23 July 2019

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5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 1-3

Date Received: 16-Jul-19 15:29



## ANALYTICAL RESULTS

Lab Number: 1907254-03  
Sample Name: Phase 3  
Date/Time Collected: 7/16/19 9:23  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Nitrate + Nitrite	mg/L	5.83		7/17/19 8:49	[CALC]	EPA 300.0, 2.1-1993
Nitrate as N	mg/L	4.67		7/17/19 8:49	B907257	EPA 300.0, 2.1-1993
Nitrite as N	mg/L	1.16		7/17/19 8:49	B907257	EPA 300.0, 2.1-1993
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	6.51		7/18/19 11:33	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	10.4		7/22/19 7:54	B907365	SM 4500-NH3 B,D,C-2011
Fecal Coliforms	MPN/100 mL	12		7/16/19 16:36	B907284	IDEXX ColiAlert-18
TKN	mg/L	8.25		7/17/19 11:00	B907270	Hach 10242, Rev. 1.1, 2013
TSS	mg/L	4.50		7/18/19 16:15	B907310	I-3765-85/SM2540 D-2011
CBOD	mg/L	6.00		7/18/19 8:12	B907308	SM 5210 B-2011,Hach 10360

23 July 2019

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5301 Northshore Dr.  
North Little Rock, AR 72118  
Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 1-3

Date Received: 16-Jul-19 15:29



## QUALITY CONTROL RESULTS

### Anions -- Batch: B907257 (Water)

Prepared: 16-Jul-19 13:06 By: MB -- Analyzed: 16-Jul-19 19:39 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	99.3% / NA	98.9% / 98.8%		0.0454%	
Nitrite as N	<0.250 mg/L	100% / NA	101% / 102%		0.691%	

### Wet Chemistry -- Batch: B907268 (Water)

Prepared: 17-Jul-19 07:55 By: TA -- Analyzed: 17-Jul-19 07:55 By: TA

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
CBOD	<2.00 mg/L	127% / 134%	NA / NA		5.41%	

### Wet Chemistry -- Batch: B907270 (Water)

Prepared: 17-Jul-19 11:00 By: HF -- Analyzed: 17-Jul-19 11:00 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TKN	<0.50 mg/L	101% / 102%	118% / NA		1.39%	

### Total Metals -- Batch: B907280 (Water)

Prepared: 17-Jul-19 10:50 By: ST -- Analyzed: 18-Jul-19 09:58 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Phosphorus	<0.036 mg/L	98.8% / NA	106% / 104%		1.86%	

### Wet Chemistry -- Batch: B907284 (Water)

Prepared: 16-Jul-19 15:02 By: CJ -- Analyzed: 16-Jul-19 15:02 By: CJ

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Fecal Coliforms	<1 MPN/100 mL	NA / NA	NA / NA	35 MPN/100 mL	26.5%	

### Wet Chemistry -- Batch: B907308 (Water)

Prepared: 18-Jul-19 08:12 By: MB -- Analyzed: 18-Jul-19 08:12 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
CBOD	<2.00 mg/L	125% / 121%	NA / NA		2.63%	

### Wet Chemistry -- Batch: B907310 (Water)

Prepared: 18-Jul-19 16:15 By: MH -- Analyzed: 18-Jul-19 16:15 By: MH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TSS	<1.00 mg/L	89.0% / 93.0%	NA / NA		4.40%	

23 July 2019

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5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 1-3

Date Received: 16-Jul-19 15:29



## QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: B907365 (Water)

Prepared: 22-Jul-19 07:54 By: PD -- Analyzed: 22-Jul-19 07:54 By: EP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	84.2% / NA	108% / 101%		3.00%	

## QUALIFIER(S)

\*FC: The sample result is actually GREATER THAN 2420 MPN/100mL. The sample growth exceeded the limit of the procedure.

\*TNTC: Too Numerous To Count

All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by:

*Norma James / Teresa Coins*

Norma James and/or Teresa Coins

Technical Director and/or QA Officer

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

[illegible]



## CHAIN-OF-CUSTODY

07/16/19

Jason Bolenbaugh

Bethel Heights Phases 1 -3

901 South Lincoln Street, Bethel Heights, AR, 72764

Sample Remarks

Longitude	Lab ID
-----------	--------

No Sample

No Sample

0060

0923

0908

Relinquished By

Received By

Name/Title

Jason Roienbach

Signature

Signature \_\_\_\_\_

Name/Title

Name/Title \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Name/Title \_\_\_\_\_

Signature

Signature

Name/Title

Name/Title

Signature

Signature

Name/Title

Name/Title

Signature \_\_\_\_\_

Signature

Effective Date: 04/16/2018





BH03

BH01

Phase 1-3

BH04

Moody-Ave

Lincoln Dr





8100 National Dr. - Little Rock, AR 72209  
501-455-3233 Fax 501-455-6118

23 July 2019

Jason Bolenbaugh  
ADEQ  
5301 Northshore Dr.  
North Little Rock, AR 72118

Project: Bethel Heights 04-00630  
Project Number: July 2019 -- Phase 4A & 4B  
SDG Number: 1907255

Enclosed are the results of analyses for samples received by the laboratory on 16-Jul-19 15:30. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	3.0°C

Sincerely,

A handwritten signature in blue ink, reading "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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23 July 2019

Jason Bolenbaugh

ADEQ

5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 4A & 4B

Date Received: 16-Jul-19 15:30



## ANALYTICAL RESULTS

Lab Number: 1907255-01  
Sample Name: Phase 4A  
Date/Time Collected: 7/16/19 11:38  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Nitrate + Nitrite	mg/L	11.4		7/17/19 13:29	[CALC]	EPA 300.0, 2.1-1993
Nitrate as N	mg/L	11.1		7/17/19 13:29	B907257	EPA 300.0, 2.1-1993
Nitrite as N	mg/L	0.349		7/17/19 9:11	B907257	EPA 300.0, 2.1-1993
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	6.92		7/18/19 11:37	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	7.08		7/18/19 10:45	B907301	SM 4500-NH3 B,D,C-2011
Fecal Coliforms	MPN/100 mL	260		7/16/19 16:36	B907284	IDEXX ColiIert-18
TKN	mg/L	< 1.00		7/17/19 11:00	B907270	Hach 10242, Rev. 1.1, 2013
TSS	mg/L	11.5		7/18/19 16:15	B907310	I-3765-85/SM2540 D-2011
CBOD	mg/L	6.36		7/18/19 8:12	B907308	SM 5210 B-2011,Hach 10360

## ANALYTICAL RESULTS

Lab Number: 1907255-02  
Sample Name: Phase 4B  
Date/Time Collected: 7/16/19 11:44  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Nitrate + Nitrite	mg/L	13.2		7/17/19 13:50	[CALC]	EPA 300.0, 2.1-1993
Nitrate as N	mg/L	12.8		7/17/19 13:50	B907257	EPA 300.0, 2.1-1993
Nitrite as N	mg/L	0.351		7/17/19 9:32	B907257	EPA 300.0, 2.1-1993
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Phosphorus	mg/L	6.54		7/18/19 11:41	B907280	EPA 200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	13.3		7/18/19 10:45	B907301	SM 4500-NH3 B,D,C-2011
Fecal Coliforms	MPN/100 mL	820		7/16/19 16:36	B907284	IDEXX ColiIert-18
TKN	mg/L	< 1.00		7/17/19 11:00	B907270	Hach 10242, Rev. 1.1, 2013
TSS	mg/L	39.5		7/18/19 16:15	B907310	I-3765-85/SM2540 D-2011
CBOD	mg/L	11.7		7/18/19 8:12	B907308	SM 5210 B-2011,Hach 10360

23 July 2019

Jason Bolenbaugh

ADEQ

5301 Northshore Dr.

North Little Rock, AR 72118

Project: Bethel Heights 04-00630

Project Number: July 2019 -- Phase 4A & 4B

Date Received: 16-Jul-19 15:30



## QUALITY CONTROL RESULTS

### Anions -- Batch: B907257 (Water)

Prepared: 16-Jul-19 13:06 By: MB -- Analyzed: 16-Jul-19 19:39 By: MB

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Nitrate as N	<0.250 mg/L	99.3% / NA	98.9% / 98.8%		0.0454%	
Nitrite as N	<0.250 mg/L	100% / NA	101% / 102%		0.691%	

### Wet Chemistry -- Batch: B907270 (Water)

Prepared: 17-Jul-19 11:00 By: HF -- Analyzed: 17-Jul-19 11:00 By: HF

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TKN	<0.50 mg/L	101% / 102%	118% / NA		1.39%	

### Total Metals -- Batch: B907280 (Water)

Prepared: 17-Jul-19 10:50 By: ST -- Analyzed: 18-Jul-19 09:58 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Phosphorus	<0.036 mg/L	98.8% / NA	106% / 104%		1.86%	

### Wet Chemistry -- Batch: B907284 (Water)

Prepared: 16-Jul-19 15:02 By: CJ -- Analyzed: 16-Jul-19 15:02 By: CJ

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Fecal Coliforms	<1 MPN/100 mL	NA / NA	NA / NA	35 MPN/100 mL	26.5%	

### Wet Chemistry -- Batch: B907301 (Water)

Prepared: 18-Jul-19 10:45 By: PD -- Analyzed: 18-Jul-19 10:45 By: PD

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Ammonia as N	<0.500 mg/L	92.7% / NA	102% / 96.4%		3.99%	

### Wet Chemistry -- Batch: B907308 (Water)

Prepared: 18-Jul-19 08:12 By: MB -- Analyzed: 18-Jul-19 08:12 By: MB

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
CBOD	<2.00 mg/L	125% / 121%	NA / NA		2.63%	

### Wet Chemistry -- Batch: B907310 (Water)

Prepared: 18-Jul-19 16:15 By: MH -- Analyzed: 18-Jul-19 16:15 By: MH

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TSS	<1.00 mg/L	89.0% / 93.0%	NA / NA		4.40%	

23 July 2019

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All Analysis performed according to EPA approved methodology when available :

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: *Norma James / Teresa Coins*

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer



Arkansas Department of Environmental Quality

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



Facility or Project Name		AFIN # / County		Sample Characteristics		Parameters Requested		Container Type Code		Media Code		Preservation Code	
Bethel Heights Phases 4A and 4B		04-00630		Grab (1) or Composite (2)		Total No. of Containers		P = Polyethylene/Plastic		W = water		A = Cool to ≤ 6°C	
Printed Name of Sampler				Container Type				G = Glass		G = groundwater		B = Sulfuric Acid	
Jason Bolenbaugh				Media Code				A = Amber Glass		L = liquid (not water)		C = Nitric Acid	
				Preservation Type				O = Other (Specify)		S = soil or solid		D = NaOH	
								Instantaneous		E = edible tissue		E = Sodium Thiosulfate	
								Flow		F = whole fish		F = Other (specify)	
										B = other			
Sample ID		Date Collected (mm/dd/yy)	Time Collected (hh:mm)					Field Measurements		Latitude (dd, dddd)		Longitude (dd, dddd)	Lab #
Phase 4A	07/16/19	1138	1	P	W	A	1	Time Analyzed	pH (SU)	DO (mg/L)	Temp (°C)		107255
Phase 4A	07/16/19	1138	1	P	W	AB	1	1140	6.55		26.7		01
Phase 4A	07/16/19	1138	1	P	W	AC	1						
Phase 4A	07/16/19	1138	1	P	W	AE	1						
Phase 4B	07/16/19	1144	1	P	W	A	1	1146	6.64		26.0		02
Phase 4B	07/16/19	1144	1	P	W	AB	1						
Phase 4B	07/16/19	1144	1	P	W	AC	1						
Phase 4B	07/16/19	1144	1	P	W	AE	1						
REMARKS / SAMPLE COMMENTS													
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 3°C													
FOR COMPLETION BY LAB ONLY													
Field TRC Measurement (mg/L)													
Time Collected:													
Time Analyzed:													
TRC Result:													
TRC Dup Result:													









BH05

Phase 4A & 4B