



A R K A N S A S
Department of Environmental Quality

June 29, 2014

Ken Johnson, Manager
Pine Bluff Wastewater Utility - Boyd Point
1520 S Ohio St
Pine Bluff, AR 71601

RE: Boyd Point WWTP Inspection (Jefferson Co)
AFIN: 35-00149 NPDES Permit No.: AR0033316

Dear Mr. Johnson:

On June 20, 2014, I performed a Sanitary Sewer Overflow Inspection 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.

Please refer to the “Summary of Findings” section of the attached inspection report and provide a written response for each violation that was noted. This response should be mailed to the attention of the Water Division Inspection Branch at the address at the bottom of this letter or e-mailed to Water-Inspection-Report@adeq.state.ar.us. This response should contain documentation describing the course of action taken to correct each item noted. This corrective action should be completed as soon as possible, and the written response with all necessary documentation (i.e. photos) is due by **August 13, 2014**.

If I can be of any assistance, please contact me at mccabe@adeq.state.ar.us or (501) 682-0642.

Sincerely,

Kerri McCabe
Inspector Supervisor
Water Division



AR K A N S A S
Department of Environmental Quality

WATER DIVISION INSPECTION REPORT

AFIN: 35-00149	PERMIT #: AR0033316	DATE: 6/20/2014
COUNTY: 35 Jefferson	PDS #: 079020	MEDIA: WN
GPS LAT: 34.26797 LONG: -92.016635 LOCATION: Sample Point		

FACILITY INFORMATION	INSPECTION INFORMATION
NAME: Boyd Point WWTP LOCATION: 900 Island Harbor Marina Rd CITY: Pine Bluff, AR 71601	FACILITY TYPE: 1 - Municipal INSPECTOR ID#: 84022 S - State FACILITY EVALUATION RATING: 2 - Marginal INSPECTION TYPE: Sanitary Sewer Overflow
	DATE(S): 6/20/2014 ENTRY TIME: 11:00 EXIT TIME: PERMIT EFFECTIVE DATE: PERMIT EXPIRATION DATE:
RESPONSIBLE OFFICIAL	
NAME / TITLE: Ken Johnson / Manager COMPANY: Pine Bluff Wastewater Utility - Boyd Point MAILING ADDRESS: 1520 S Ohio St CITY, STATE, ZIP: Pine Bluff AR 71601 PHONE & EXT: / FAX: 8705356603 / EMAIL:	FAYETTEVILLE SHALE RELATED: N FAYETTEVILLE SHALE VIOLATIONS: N
CONTACTED DURING INSPECTION: No	INSPECTION PARTICIPANTS
	NAME/TITLE/PHONE/FAX/EMAIL/ETC.: Amber Zajac, Environmental Specialist, Graphics Flexible Packaging

AREA EVALUATIONS					
(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Applicable/Evaluated)					
**	PERMIT	**	FLOW MEASUREMENT	**	STORMWATER
**	RECORDS/REPORTS	**	LABORATORY	**	FACILITY SITE REVIEW
**	OPERATION & MAINTENANCE	**	EFFLUENT/RECEIVING WATER	**	SELF-MONITORING PROGRAM
**	SAMPLING	**	SLUDGE HANDLING/DISPOSAL	**	PRETREATMENT
M	OTHER: SSO				

SUMMARY OF FINDINGS

- 1.) On June 11, 2014, a rupture of a 30", pressurized line caused the release of untreated sewage. The untreated sewage then entered an unnamed slough on Graphics Flexible Packaging (GFP) property. This is a violation of Arkansas Water and Air Pollution Control Act 472 ACA § 8-4-217 (a)(1), which states, "It shall be unlawful for any person to cause pollution, as defined in § 8-4-102, of any of the waters of this state."
- 2.) Samples collected at the surface of the unnamed slough on GFP property resulted in the following Dissolved Oxygen (DO) readings: SL-1 1.21 mg/L at 29.2 degC, SL-2 0.22 mg/L at 32.0 degC, SL-3 0.86 mg/L at 31.6 degC, SL-4 0.58 mg/L at 33.8 degC, and SL-5 0.25 mg/L at 33.0 degC. The DO standard for lakes and reservoirs is 5 mg/L applicable at 1.0 meter depth (state-wide). This is a violation of Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 2.505 (Dissolved Oxygen). A background sample was collected on the GFP property and adjacent to the unnamed slough in an unnamed pond. The DO reading for this sample was 10.33 mg/L at 31.9 degC.
- 3.) Samples collected at the surface of the unnamed slough on GFP property resulted in the following Bacteria (Fecal Coliforms) readings: SL-1 ~6000 cfu/100ml, SL-2 ~140000 cfu/100ml, SL-3 ~200000 cfu/100ml, SL-4 ~740000 cfu/100ml, and SL-5 790000 cfu/100ml. The standard for Fecal Coliform for Secondary Contact waters is 1000 col/100ml using the Geometric Mean (calculated for a minimum of five samples). This is a violation of APC&EC Regulation 2.507 (Bacteria). A background sample was collected on the GFP property and adjacent to the unnamed slough in an unnamed pond. The Bacteria (Fecal Coliforms) reading for this sample was ~5 cfu/100ml.

GENERAL COMMENTS

On June 20, 2014 a sampling event was conducted on the Graphics Flexible Packaging (GFP) property where on Wednesday June 11, 2014 a reported 6000 gallon Sanitary Sewer Overflow (SSO) had occurred at a ruptured 30" pressurized main belonging to Pine Bluff Wastewater Utility. The alleged 6000 gallons of untreated sewage flowed to a depression on the GFP property as well as into an unnamed slough of the Arkansas River. District 6 Inspector Steve Henderson had been to the location Wednesday June 18, 2014 with representatives from GFP and Pine Bluff Wastewater Utility.

A pumper truck was present upon my arrival at 1100, and a crew was actively pumping water from the depression on GFP property. The main had been repaired prior to Inspector Henderson's site visit. A length of the slough of the Arkansas River was walked for observations and to determine appropriate sample locations. There were visible septic conditions within the slough (i.e., black water and dead crayfish). No solids were observed. A putrid odor of raw sewage was also present.

Six (6) locations were sampled: a freshwater pond on GFP property and not associated with the GFP WWTP was used as the background and duplicate site, and the other five (5) sites were near the start of the discharge of raw sewage into the slough (SL-1) and then continued down the length of the slough away from the discharge point (SL-2 – 5; see attached Google Earth map).

Since Pine Bluff Wastewater Utility has a Pretreatment Program with significant and categorical Industrial Users (IUs), the following parameters for surface water were sampled: Fecal Coliform Bacteria (FCB), Ammonia-Nitrogen, Total Suspended Solids (TSS), Total Recoverable Metals, Total Dissolved Metals, Total Organic Carbon (TOC), Dissolved Oxygen (DO), and pH. Calibration information for field meters is available upon request.

Attached is the SSO report indicating this release was not an endangerment to public or the environment. Also, attached is a non-compliance report.



INSPECTOR'S SIGNATURE: 	Kerri McCabe	DATE: 7/25/2014
SUPERVISOR'S SIGNATURE: 	Jason Bolenbaugh	DATE: 7/27/2014



Figure 1. Google Earth image dated Feb 2, 2013 showing surrounding area and sample locations. Red line - direction of SSO. Blue line – unnamed slough.

Sanitary Sewer Overflow Monthly Report

Facility Name: Pine Bluff Wastewater Utility **Permit Number:** AR0033316 **Reporting Period(Month/Year)** June, 2014

No Sanitary Sewer Overflows This Monitoring Period

Summary Report Code Descriptions					
Cause(s) of SSO		SSO Impact		Action(s) Taken	Ultimate Discharge Location
CO-Construction	D-Debris	NEAH-No Evidence of Adverse Health or Environmental Impact		WO-Work Order	CR-Creek/Stream/River (please specify)
E-Equipment Failure	G-Grease	OEHC-Observed or Evidence of Human Contact		EC-Environmental Cleanup	DI-Ditch
HC-Hydro Clean	LF-Line Failure/Break	EFK-Evidence of Fish Kill		HC-Hydro Cleaned	DR-Drop Inlet
R-Rainfall	RG-Roots & Grease			HR-Hand Rodded	GR-Ground Surface
RO-Roots	V-Vandalism			EN-Referred to Engineering	PA-Paved Area
				PN-Public Notification	CB-Contained in Building

Location	Manhole #	Start Date of SSO	End Date of SSO	Estimated Volume (in gallons)	Cause of SSO	Environmental Impact	Action (s) Taken to Address SSO	Ultimate Discharge Location
1,000 ft of the intersection at Jeffeson Parkway & Mcfadden Road		6/11/2014	6/12/2014	6,000	*LF	NEAH	WO, EC	GR, SLOUGH
* Soil Corrosion may have caused pipe to corrode and fail.								

7/15/2014

Signature of Cognizant or Ranking Official

Date

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PINE BLUFF WASTEWATER UTILITY

1520 S. OHIO ST. • PINE BLUFF, ARKANSAS 71601-6055 • PHONE: (870) 535-6603 • FAX (870) 535-6243

June 19, 2014

Alan Anderson, Enforcement Analyst
ADEQ
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: Sanitary Sewer Overflow

Dear Mr. Anderson:

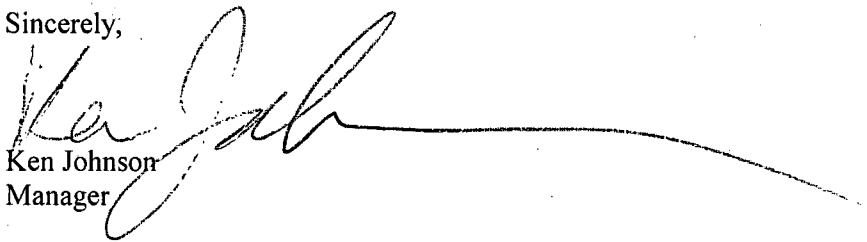
Pine Bluff Wastewater Utility was notified June 11, 2014 by an employee of Graphic Flexible Mill concerning a leak on our line. PBWU crews were dispatched to an area that was about 1,000 feet of the intersection of Jefferson Parkway and McFadden Road. After arriving, the crew began working to uncover the leaking pipe so that we could determine the plan of action needed to replace or repair the damaged line.

The crew exposed the damaged pipe and discovered holes in the top and bottom of the 30" ductile iron pipe. It is suspected that the damage to the pipe may have potentially been caused by the soil bedding the pipe. The crew replaced approximately 120 ft. section of pipe to complete the repair of the force main. Once the repair was completed, the excavated area containing the pipe was covered using our heavy equipment. We initially recognized and reported an SSO in the low area of the property that we felt comfortable it was contained. When Steven Henderson (ADEQ Inspector) visited the site on June 18th, we discovered that some of the sewage entered a slough area. At the time of the overflow, we were unable to determine that some of the sewage had entered that area due to the high grass that surrounds the area.

The Pine Bluff Wastewater Utility will keep the Arkansas Department of Environmental Quality updated of the progress. The wastewater laboratory technicians have taken some fecal coliform samples for testing and will take additional samples to monitor the the low level area which may have contained run off from the site location. We will be working toward pumping and removing wastewater from the area and will conduct additional fecal coliform tests.

In addition, we have collected soil samples to have it analyzed to determine if it contain corrosive properties and could have potentially compromised the integrity of the pipe. We hope to find out the root cause of the pipe damage to prevent similar problems from recurring. If there should be any questions or concerns pertaining to this letter, please feel free to contact me at 870-535-6603.

Sincerely,


Ken Johnson
Manager

Cc: Vincent Miles, Environmental Compliance Supervisor

CERTIFIED MAIL™



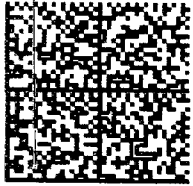
PINE BLUFF WASTEWATER UTILITY

1520 S. Ohio Street • Pine Bluff, Arkansas 71601-6000

Serving Our Community, While Protecting The Environment



7011 2970 0002 2648 0227

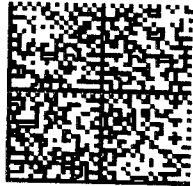


US POSTAGE

\$ 00.48

First-Class

Mailed From 71601
06/20/2014
032A 0061819804



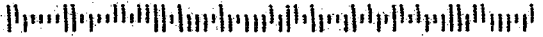
US POSTAGE

\$ 06.00

Mailed From 71601
06/20/2014
032A 0061819804

Alan Anderson, Enforcement
ADEQ
5301 Northshore Drive
N. Little Rock, AR 72118

72118531799





5301 Northshore Drive
North Little Rock, AR 72118
Telephone: 501-682-0744

Client Report For: GFP Boyd Point WWTP Main SSO 2014 2091-2097
Attention:
Client Address:

,

Report Date: July 02, 2014
LAB ID: AR14JUN20-01
Comment:

Approved By: _____

Date: July 02, 2014

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples **Client Sample ID:** GFP Slough Background
Lab ID: 2014-2091 **Collection Date:** 6/20/2014 11:10:00 AM
Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~5	4	4		cfu/100ml
Analyzed By	Lazendra L Hairston				
Analysis Date/Time	6-20-2014 15:45				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough Discharge

Lab ID: 2014-2092

Collection Date: 6/20/2014 11:40:00 AM

Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~6000	4	4		cfu/100ml

Analyzed By Lazendra L Hairston

Analysis Date/Time 6-20-2014 15:45

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (100 ft)

Lab ID: 2014-2093

Collection Date: 6/20/2014 11:55:00 AM

Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~>140000	4	4		cfu/100ml
Analyzed By	Lazendra L Hairston				
Analysis Date/Time	6-20-2014 15:45				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (200 ft)

Lab ID: 2014-2094

Collection Date: 6/20/2014 12:15:00 PM

Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~>200000	4	4		cfu/100ml

Analyzed By Lazendra L Hairston

Analysis Date/Time 6-20-2014 15:45

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (300 ft)

Lab ID: 2014-2095

Collection Date: 6/20/2014 12:40:00 PM

Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~>740000	4	4		cfu/100ml
Analyzed By	Lazendra L Hairston				
Analysis Date/Time	6-20-2014 15:45				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (400 ft)

Lab ID: 2014-2096

Collection Date: 6/20/2014 1:00:00 PM

Matrix: Water

Analyses

Fecal Coliforms

SM 9222 D

Batch: 14062301 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Fecal Coliforms	~>790000	4	4		cfu/100ml

Analyzed By Lazendra L Hairston

Analysis Date/Time 6-20-2014 15:45

Client: Special Samples	Client Sample ID: GFP Slough Background
Lab ID: 2014-2091	Collection Date: 6/20/2014 11:10:00 AM
Matrix: Water	

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	<0.03	0.03	0.03		mg/L
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 3:09:01 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	18	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	7.95	0.2	0.2		mg/L
Dilution Factor	1				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 9:14AM				

Client: Special Samples	Client Sample ID: GFP Slough Discharge
Lab ID: 2014-2092	Collection Date: 6/20/2014 11:40:00 AM
	Matrix: Water

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705	Run: 1		
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	13.7	0.6	0.03		mg/L
Dilution Factor	20				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:31:29 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004	Run: 1		
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	41	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410	Run: 1		
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	58	0.8	0.2		mg/L
Dilution Factor	4				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 10:27AM				

Arkansas Department of Environmental Quality
 5301 Northshore Drive
 North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
 Ruehr@adeq.state.ar.us
 501-682-0955

Client: Special Samples	Client Sample ID: GFP Slough (100 ft)
Lab ID: 2014-2093	Collection Date: 6/20/2014 11:55:00 AM
Matrix: Water	

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	16.0	0.6	0.03		mg/L
Dilution Factor	20				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:32:50 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	34	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	62	0.8	0.2		mg/L
Dilution Factor	4				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 10:45AM				

Client: Special Samples	Client Sample ID: GFP Slough (200 ft)
Lab ID: 2014-2094	Collection Date: 6/20/2014 12:15:00 PM
Matrix: Water	

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	15.2	0.6	0.03		mg/L
Dilution Factor	20				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:34:10 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	52	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	60	0.8	0.2		mg/L
Dilution Factor	4				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 11:05AM				

Arkansas Department of Environmental Quality
 5301 Northshore Drive
 North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
 Ruehr@adeq.state.ar.us
 501-682-0955

Client: Special Samples	Client Sample ID: GFP Slough (300 ft)
Lab ID: 2014-2095	Collection Date: 6/20/2014 12:40:00 PM
Matrix: Water	

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	5.42	0.6	0.03		mg/L
Dilution Factor	20				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:35:30 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	124	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	68	0.8	0.2		mg/L
Dilution Factor	4				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 11:24AM				

Client: Special Samples	Client Sample ID: GFP Slough (400 ft)
Lab ID: 2014-2096	Collection Date: 6/20/2014 1:00:00 PM
Matrix: Water	

Analyses

Ammonia as Nitrogen	SM 4500-NH3 H (20th)	Batch: 14062705 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Ammonia as N	3.44	0.6	0.03		mg/L
Dilution Factor	20				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:39:30 PM				

Total Suspended Solids	EPA 160.2	Batch: 14063004 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Suspended Solids	56	1.0	1.0		mg/L
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

Total Organic Carbon	SM 5310 C (20th)	Batch: 14062410 Run: 1			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	70	0.8	0.2		mg/L
Dilution Factor	4				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 11:42AM				

Client: Special Samples	Client Sample ID: GFP Slough Background
Lab ID: 2014-2091	Collection Date: 6/20/2014 11:10:00 AM
Matrix: Water	

Analyses

Dissolved Metals by EPA 200.8

EPA 200.8

Batch: 14062401 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<20	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	5.38	0.5	0.2		ug/L
Barium	76.2	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	41.7	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	22.6	0.03	0.03		mg/L
Chromium	<0.5	0.5	0.05		ug/L
Cobalt	<0.5	0.5	0.05		ug/L
Copper	0.84	0.5	0.2		ug/L
Iron	<20	20	5.0		ug/L
Lead	0.96	0.3	0.02		ug/L
Magnesium	6.64	0.02	0.01		mg/L
Manganese	2.58	0.3	0.07		ug/L
Nickel	0.52	0.5	0.15		ug/L
Potassium	2.51	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	5.48	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Sodium	19.3	0.02	0.01		mg/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	1.78	0.5	0.3		ug/L
Zinc	2.57	1	0.3		ug/L
Hardness	83.8	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 11:16AM				

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

Result Reporting MDL Qual Unit

		<u>Limit</u>		
Aluminum	288	20	20	ug/L
Antimony	<10	10	5	ug/L
Arsenic	6.44	1	0.5	ug/L
Barium	85.9	10	2.0	ug/L
Beryllium	<0.5	0.5	0.1	ug/L
Boron	41.6	25	5.0	ug/L
Cadmium	<1	1	0.3	ug/L
Calcium	23.3	0.04	0.04	mg/L
Chromium	<1	1	0.3	ug/L
Cobalt	<1	1	0.5	ug/L
Copper	1.07	1	0.5	ug/L
Iron	411	20	10.0	ug/L
Lead	3.79	1	0.1	ug/L
Magnesium	7.03	0.1	0.1	mg/L
Manganese	98.3	1	0.2	ug/L
Nickel	<2.5	2.5	0.5	ug/L
Potassium	2.77	1	0.05	mg/L
Selenium	<2	2	0.5	ug/L
Silver	<5	5	1.0	ug/L
Sodium	19.3	0.04	0.02	mg/L
Thallium	<2.5	2.5	0.05	ug/L
Vanadium	2.93	2.5	1.0	ug/L
Zinc	<3	3	2.0	ug/L
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 3:09PM			
Prep By				
Prep Date/Time				

Client: Special Samples **Client Sample ID:** GFP Slough Discharge
Lab ID: 2014-2092 **Collection Date:** 6/20/2014 11:40:00 AM
Matrix: Water

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	33.9	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	3.98	0.5	0.2		ug/L
Barium	94.4	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	174	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	22.3	0.03	0.03		mg/L
Chromium	0.59	0.5	0.05		ug/L
Cobalt	1.18	0.5	0.05		ug/L
Copper	0.83	0.5	0.2		ug/L
Iron	180	20	5.0		ug/L
Lead	<0.3	0.3	0.02		ug/L
Magnesium	5.24	0.02	0.01		mg/L
Manganese	526	0.3	0.07		ug/L
Nickel	17.0	0.5	0.15		ug/L
Potassium	21.7	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	16.1	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	1.33	0.5	0.3		ug/L
Zinc	5.25	1	0.3		ug/L
Hardness	77.3	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 11:42AM				

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 2</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

Sodium	168	0.2	0.01	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 1:16PM			

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 2

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Sodium	177	0.4	0.02		mg/L
Dilution Factor	10				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 3:36PM				
Prep By					
Prep Date/Time					

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	432	20	20		ug/L
Antimony	<10	10	5		ug/L
Arsenic	4.41	1	0.5		ug/L
Barium	100	10	2.0		ug/L
Beryllium	<0.5	0.5	0.1		ug/L
Boron	177	25	5.0		ug/L
Cadmium	<1	1	0.3		ug/L
Calcium	24.3	0.04	0.04		mg/L
Chromium	<1	1	0.3		ug/L
Cobalt	1.55	1	0.5		ug/L
Copper	2.28	1	0.5		ug/L
Iron	982	20	10.0		ug/L
Lead	1.55	1	0.1		ug/L
Magnesium	5.75	0.1	0.1		mg/L
Manganese	551	1	0.2		ug/L
Nickel	19.8	2.5	0.5		ug/L
Potassium	23.8	1	0.05		mg/L
Selenium	<2	2	0.5		ug/L
Silver	<5	5	1.0		ug/L
Thallium	<2.5	2.5	0.05		ug/L
Vanadium	<2.5	2.5	1.0		ug/L

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Zinc	22.8	3	2.0	ug/L
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:21PM			
Prep By				
Prep Date/Time				

Client: Special Samples **Client Sample ID:** GFP Slough (100 ft)
Lab ID: 2014-2093 **Collection Date:** 6/20/2014 11:55:00 AM
Matrix: Water

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	44.7	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	3.92	0.5	0.2		ug/L
Barium	100	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	232	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	16.7	0.03	0.03		mg/L
Chromium	0.74	0.5	0.05		ug/L
Cobalt	1.33	0.5	0.05		ug/L
Copper	1.79	0.5	0.2		ug/L
Iron	329	20	5.0		ug/L
Lead	<0.3	0.3	0.02		ug/L
Magnesium	5.29	0.02	0.01		mg/L
Manganese	546	0.3	0.07		ug/L
Nickel	20.8	0.5	0.15		ug/L
Potassium	19.0	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	13.5	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	1.83	0.5	0.3		ug/L
Zinc	10.8	1	0.3		ug/L
Hardness	63.6	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 11:49AM				

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 2</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

Sodium	185	0.2	0.01	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 1:23PM			

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 2

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Sodium	178	0.4	0.02		mg/L
Dilution Factor	10				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 3:42PM				
Prep By					
Prep Date/Time					

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	470	20	20		ug/L
Antimony	<10	10	5		ug/L
Arsenic	4.30	1	0.5		ug/L
Barium	96.0	10	2.0		ug/L
Beryllium	<0.5	0.5	0.1		ug/L
Boron	192	25	5.0		ug/L
Cadmium	<1	1	0.3		ug/L
Calcium	20.7	0.04	0.04		mg/L
Chromium	1.08	1	0.3		ug/L
Cobalt	1.68	1	0.5		ug/L
Copper	2.87	1	0.5		ug/L
Iron	1190	20	10.0		ug/L
Lead	1.57	1	0.1		ug/L
Magnesium	5.40	0.1	0.1		mg/L
Manganese	544	1	0.2		ug/L
Nickel	22.8	2.5	0.5		ug/L
Potassium	23.6	1	0.05		mg/L
Selenium	<2	2	0.5		ug/L
Silver	<5	5	1.0		ug/L
Thallium	<2.5	2.5	0.05		ug/L
Vanadium	<2.5	2.5	1.0		ug/L

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Zinc	28.9	3	2.0	ug/L
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:28PM			
Prep By				
Prep Date/Time				

Client: Special Samples

Client Sample ID: GFP Slough (200 ft)

Lab ID: 2014-2094

Collection Date: 6/20/2014 12:15:00 PM

Matrix: Water

Analyses

Dissolved Metals by EPA 200.8

EPA 200.8

Batch: 14062401 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	36.1	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	3.73	0.5	0.2		ug/L
Barium	96.8	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	207	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	16.9	0.03	0.03		mg/L
Chromium	0.74	0.5	0.05		ug/L
Cobalt	1.28	0.5	0.05		ug/L
Copper	1.29	0.5	0.2		ug/L
Iron	219	20	5.0		ug/L
Lead	<0.3	0.3	0.02		ug/L
Magnesium	5.34	0.02	0.01		mg/L
Manganese	563	0.3	0.07		ug/L
Nickel	19.2	0.5	0.15		ug/L
Potassium	21.7	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	14.1	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	1.14	0.5	0.3		ug/L
Zinc	8.69	1	0.3		ug/L
Hardness	64.1	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 11:55AM				

Dissolved Metals by EPA 200.8

EPA 200.8

Batch: 14062401 Run: 2

<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
---------------	----------------------------	------------	-------------	-------------

Sodium	186	0.2	0.01	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 1:30PM			

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 2

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Sodium	206	0.4	0.02		mg/L
Dilution Factor	10				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 3:49PM				
Prep By					
Prep Date/Time					

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	982	20	20		ug/L
Antimony	<10	10	5		ug/L
Arsenic	3.83	1	0.5		ug/L
Barium	114	10	2.0		ug/L
Beryllium	<0.5	0.5	0.1		ug/L
Boron	217	25	5.0		ug/L
Cadmium	<1	1	0.3		ug/L
Calcium	21.5	0.04	0.04		mg/L
Chromium	1.69	1	0.3		ug/L
Cobalt	1.89	1	0.5		ug/L
Copper	2.84	1	0.5		ug/L
Iron	1400	20	10.0		ug/L
Lead	2.10	1	0.1		ug/L
Magnesium	6.10	0.1	0.1		mg/L
Manganese	597	1	0.2		ug/L
Nickel	22.3	2.5	0.5		ug/L
Potassium	27.6	1	0.05		mg/L
Selenium	<2	2	0.5		ug/L
Silver	<5	5	1.0		ug/L
Thallium	<2.5	2.5	0.05		ug/L
Vanadium	2.90	2.5	1.0		ug/L

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Zinc	25.1	3	2.0	ug/L
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:34PM			
Prep By				
Prep Date/Time				

Client: Special Samples **Client Sample ID:** GFP Slough (300 ft)
Lab ID: 2014-2095 **Collection Date:** 6/20/2014 12:40:00 PM
Matrix: Water

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	23.2	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	4.71	0.5	0.2		ug/L
Barium	140	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	220	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	25.9	0.03	0.03		mg/L
Chromium	0.67	0.5	0.05		ug/L
Cobalt	1.23	0.5	0.05		ug/L
Copper	0.59	0.5	0.2		ug/L
Iron	222	20	5.0		ug/L
Lead	0.38	0.3	0.02		ug/L
Magnesium	7.36	0.02	0.01		mg/L
Manganese	665	0.3	0.07		ug/L
Nickel	15.2	0.5	0.15		ug/L
Potassium	25.2	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	15.4	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	1.40	0.5	0.3		ug/L
Zinc	17.9	1	0.3		ug/L
Hardness	95.1	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 12:02PM				

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 2</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

Sodium	177	0.2	0.01	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 1:36PM			

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 2

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Sodium	199	0.4	0.02		mg/L
Dilution Factor	10				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 3:55PM				
Prep By					
Prep Date/Time					

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	1400	20	20		ug/L
Antimony	<10	10	5		ug/L
Arsenic	4.84	1	0.5		ug/L
Barium	149	10	2.0		ug/L
Beryllium	<0.5	0.5	0.1		ug/L
Boron	232	25	5.0		ug/L
Cadmium	<1	1	0.3		ug/L
Calcium	30.4	0.04	0.04		mg/L
Chromium	2.22	1	0.3		ug/L
Cobalt	2.19	1	0.5		ug/L
Copper	3.16	1	0.5		ug/L
Iron	1980	20	10.0		ug/L
Lead	3.45	1	0.1		ug/L
Magnesium	8.48	0.1	0.1		mg/L
Manganese	711	1	0.2		ug/L
Nickel	18.1	2.5	0.5		ug/L
Potassium	28.6	1	0.05		mg/L
Selenium	<2	2	0.5		ug/L
Silver	<5	5	1.0		ug/L
Thallium	<2.5	2.5	0.05		ug/L
Vanadium	4.31	2.5	1.0		ug/L

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Zinc	24.6	3	2.0	ug/L
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:41PM			
Prep By				
Prep Date/Time				

Client: Special Samples	Client Sample ID: GFP Slough (400 ft)
Lab ID: 2014-2096	Collection Date: 6/20/2014 1:00:00 PM
Matrix: Water	

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<20	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	3.76	0.5	0.2		ug/L
Barium	96.9	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	266	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	22.3	0.03	0.03		mg/L
Chromium	0.53	0.5	0.05		ug/L
Cobalt	1.05	0.5	0.05		ug/L
Copper	<0.5	0.5	0.2		ug/L
Iron	363	20	5.0		ug/L
Lead	<0.3	0.3	0.02		ug/L
Magnesium	7.02	0.02	0.01		mg/L
Manganese	548	0.3	0.07		ug/L
Nickel	14.5	0.5	0.15		ug/L
Potassium	24.8	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	14.4	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	0.98	0.5	0.3		ug/L
Zinc	6.09	1	0.3		ug/L
Hardness	84.6	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 12:08PM				

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 2</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>

Sodium	153	0.2	0.01	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 1:43PM			

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	262	20	20		ug/L
Antimony	<10	10	5		ug/L
Arsenic	4.22	1	0.5		ug/L
Barium	110	10	2.0		ug/L
Beryllium	<0.5	0.5	0.1		ug/L
Boron	250	25	5.0		ug/L
Cadmium	<1	1	0.3		ug/L
Calcium	26.5	0.04	0.04		mg/L
Chromium	<1	1	0.3		ug/L
Cobalt	1.41	1	0.5		ug/L
Copper	1.49	1	0.5		ug/L
Iron	942	20	10.0		ug/L
Lead	1.03	1	0.1		ug/L
Magnesium	7.50	0.1	0.1		mg/L
Manganese	566	1	0.2		ug/L
Nickel	16.1	2.5	0.5		ug/L
Potassium	29.5	1	0.05		mg/L
Selenium	<2	2	0.5		ug/L
Silver	<5	5	1.0		ug/L
Thallium	<2.5	2.5	0.05		ug/L
Vanadium	<2.5	2.5	1.0		ug/L
Zinc	21.8	3	2.0		ug/L

Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:47PM			
Prep By				
Prep Date/Time				

Total Metals by EPA 200.8

EPA 200.8

Batch: 14062402 Run: 2

<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
---------------	----------------------------	------------	-------------	-------------

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Sodium	168	0.4	0.02	mg/L
Dilution Factor	10			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 4:02PM			
Prep By				
Prep Date/Time				

Client: Special Samples	Client Sample ID: Metals Field Blank
Lab ID: 2014-2097	Collection Date: 6/20/2014 11:00:00 AM
Matrix: Water	

Analyses

<i>Dissolved Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 14062401 Run: 3</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Aluminum	<20	20	20		ug/L
Antimony	<5	5	1.0		ug/L
Arsenic	<0.5	0.5	0.2		ug/L
Barium	<2	2	0.4		ug/L
Beryllium	<0.1	0.1	0.04		ug/L
Boron	<5	5	2.0		ug/L
Cadmium	<0.1	0.1	0.05		ug/L
Calcium	<0.03	0.03	0.03		mg/L
Chromium	<0.5	0.5	0.05		ug/L
Cobalt	<0.5	0.5	0.05		ug/L
Copper	<0.5	0.5	0.2		ug/L
Iron	<20	20	5.0		ug/L
Lead	<0.3	0.3	0.02		ug/L
Magnesium	<0.02	0.02	0.01		mg/L
Manganese	<0.3	0.3	0.07		ug/L
Nickel	<0.5	0.5	0.15		ug/L
Potassium	<0.02	0.02	0.01		mg/L
Selenium	<1	1	0.2		ug/L
Silicon Dioxide	<0.05	0.05	0.01		mg/L
Silver	<0.5	0.5	0.02		ug/L
Sodium	0.140	0.02	0.01		mg/L
Thallium	<0.5	0.5	0.005		ug/L
Vanadium	<0.5	0.5	0.3		ug/L
Zinc	<1	1	0.3		ug/L
Hardness	<1	1	1.0		mg/L
Dilution Factor	1				
Analyzed By	Robert Graddy				
Analysis Date/Time	Jun 23 2014 12:15PM				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples **Client Sample ID:** GFP Slough Background
Lab ID: 2014-2091 **Collection Date:** 6/20/2014 11:10:00 AM
Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	10.3				mg/L
pH	8.52				SU
Temperature	31.9				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 11:10				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough Discharge

Lab ID: 2014-2092

Collection Date: 6/20/2014 11:40:00 AM

Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	1.21				mg/L
pH	7.08				SU
Temperature	29.2				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 11:40				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (100 ft)

Lab ID: 2014-2093

Collection Date: 6/20/2014 11:55:00 AM

Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	0.22				mg/L
pH	7.09				SU
Temperature	32				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 11:55				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (200 ft)

Lab ID: 2014-2094

Collection Date: 6/20/2014 12:15:00 PM

Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	0.86				mg/L
pH	7.15				SU
Temperature	31.6				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 12:15				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (300 ft)

Lab ID: 2014-2095

Collection Date: 6/20/2014 12:40:00 PM

Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	0.58				mg/L
pH	7.76				SU
Temperature	33.8				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 12:40				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Client: Special Samples

Client Sample ID: GFP Slough (400 ft)

Lab ID: 2014-2096

Collection Date: 6/20/2014 1:00:00 PM

Matrix: Water

Analyses

Field Data

Batch: 14070105 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>MDL</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	0.25				mg/L
pH	7.15				SU
Temperature	33				C
Analyzed By	Kerri McCabe				
Analysis Date/Time	6/20/2014 13:00				

Analytical Quality Control Results Report

Batch: 14062301	Fecal Coliforms - water
<i>GFP Slough Background</i>	<i>LIMS ID: 2014-2091</i>

Fecal Coliforms DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
Fecal Coliforms	~<2 cfu/100ml	4	4		
Fecal Coliforms (RPD)	0 %				0 - 20
Analysis Date/Time	6-20-2014 15:45				
Analyzed By	Lazendra L Hairston				

Analytical Quality Control Results Report

Batch: 14062410	TOC - water
GFP Slough Background	LIMS ID: 2014-2091

TOC - water DUP

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Organic Carbon	7.87 mg/L	0.2	0.2		
Total Organic Carbon (RPD)	1.0 %				0 - 20
Dilution Factor	1				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 9:32AM				

GFP Slough Background	LIMS ID: 2014-2091
------------------------------	---------------------------

TOC - water MS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Organic Carbon (% Recovery)	103 %			80 - 120	
Dilution Factor	1				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 9:50AM				

GFP Slough Background	LIMS ID: 2014-2091
------------------------------	---------------------------

TOC - water MSD

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Organic Carbon (% Recovery)	101 %			80 - 120	
Total Organic Carbon (RPD)	0.8 %				0 - 20
Dilution Factor	1				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 10:10AM				

MB	LIMS ID: 14062410-MB-01
-----------	--------------------------------

TOC - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Organic Carbon	<0.2 mg/L	0.2	0.2		
Dilution Factor	1				
Analyzed By	Chad Carrington				

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Analysis Date/Time Jun 24 2014
8:36AM

LCS **LIMS ID: 14062410-LCS-01**

TOC - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Organic Carbon (% Recovery)	105 %			90 - 110	
Dilution Factor	1				
Analyzed By	Chad Carrington				
Analysis Date/Time	Jun 24 2014 8:56AM				

Analytical Quality Control Results Report

Batch: 14062705	Lachat - Ammonia (water)
<i>GFP Slough Background</i>	<i>LIMS ID: 2014-2091</i>

Ammonia as N - water DUP

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (RPD)	43.4 %				0 - 20
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 3:10:23 PM				

MB	LIMS ID: 14062705-MB-01
-----------	--------------------------------

Ammonia as N - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:26:07 PM				

LCS	LIMS ID: 14062705-LCS-01
------------	---------------------------------

Ammonia as N - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	99.0 %			80 - 120	
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 12:27:28 PM				

MB	LIMS ID: 14062705-MB-02
-----------	--------------------------------

Ammonia as N - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 1:11:31				

PM

LCS **LIMS ID: 14062705-LCS-02**

Ammonia as N - water LCS **Run: 1**

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	99.3 %			80 - 120	
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 1:12:52 PM				

MB **LIMS ID: 14062705-MB-03**

Ammonia as N - water MB **Run: 1**

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 1:51:38 PM				

LCS **LIMS ID: 14062705-LCS-03**

Ammonia as N - water LCS **Run: 1**

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	98.2 %			80 - 120	
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 1:52:57 PM				

MB **LIMS ID: 14062705-MB-04**

Ammonia as N - water MB **Run: 1**

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 2:31:40 PM				

LCS	LIMS ID: 14062705-LCS-04
------------	---------------------------------

Ammonia as N - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	99.8 %			80 - 120	
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 2:33:01 PM				

MB	LIMS ID: 14062705-MB-05
-----------	--------------------------------

Ammonia as N - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03	0.03		
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 3:14:26 PM				

LCS	LIMS ID: 14062705-LCS-05
------------	---------------------------------

Ammonia as N - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	98.7 %			80 - 120	
Dilution Factor	1				
Analyzed By	John Hawkins				
Analysis Date/Time	6/25/2014 3:15:46 PM				

Analytical Quality Control Results Report

Batch: 14062402	ICP Metals - water (total)
<i>GFP Slough Background</i>	<i>LIMS ID: 2014-2091</i>

ICP Metals - water (Total) DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
Aluminum	508 ug/L	20	20		
Aluminum (RPD)	55.3 %				0 - 20
Antimony (RPD)	71.8 %				0 - 20
Antimony	<10 ug/L	5	10		
Arsenic	6.52 ug/L	0.5	1		
Arsenic (RPD)	1.1 %				0 - 20
Barium (RPD)	1.5 %				0 - 20
Barium	87.2 ug/L	2	10		
Beryllium	<0.5 ug/L	0.1	0.5		
Beryllium (RPD)	11.3 %				0 - 20
Boron (RPD)	0.3 %				0 - 20
Boron	41.7 ug/L	5	25		
Cadmium (RPD)	171 %				0 - 20
Cadmium	<1 ug/L	0.3	1		
Calcium	23.3 mg/L	0.04	0.04		
Calcium (RPD)	0.1 %				0 - 20
Chromium (RPD)	29.8 %				0 - 20
Chromium	<1 ug/L	0.3	1		
Cobalt	<1 ug/L	0.5	1		
Cobalt (RPD)	21.8 %				0 - 20
Copper (RPD)	2.4 %				0 - 20
Copper	1.04 ug/L	0.5	1		
Iron	483 ug/L	10	20		
Iron (RPD)	16.2 %				0 - 20
Lead (RPD)	51.2 %				0 - 20
Lead	2.24 ug/L	0.1	1		
Magnesium	7.15 mg/L	0.1	0.1		
Magnesium (RPD)	1.7 %				0 - 20
Manganese	98 ug/L	0.2	1		
Manganese (RPD)	0.1 %				0 - 20
Nickel (RPD)	3.3 %				0 - 20
Nickel	<2.5 ug/L	0.5	2.5		
Potassium	2.70 mg/L	0.05	1		

Potassium (RPD)	2.5 %			0 - 20
Selenium (RPD)	15.8 %			0 - 20
Selenium	<2 ug/L	0.5	2	
Silver	<5 ug/L	1	5	
Silver (RPD)	168 %			0 - 20
Sodium (RPD)	0.4 %			0 - 20
Sodium	19.2 mg/L	0.02	0.04	
Thallium	<2.5 ug/L	0.05	2.5	
Thallium (RPD)	138 %			0 - 20
Vanadium (RPD)	2.5 %			0 - 20
Vanadium	3.01 ug/L	1	2.5	
Zinc	<3 ug/L	2	3	
Zinc (RPD)	0.9 %			0 - 20
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 3:16PM			

GFP Slough Background

LIMS ID: 2014-2091

ICP Metals - water (Total) MS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Aluminum (% Recovery)	169 %			70 - 130	
Antimony (% Recovery)	94.3 %			70 - 130	
Arsenic (% Recovery)	100 %			70 - 130	
Barium (% Recovery)	93.6 %			70 - 130	
Beryllium (% Recovery)	97.4 %			70 - 130	
Boron (% Recovery)	97.7 %			70 - 130	
Cadmium (% Recovery)	92.6 %			70 - 130	
Calcium (% Recovery)	90.7 %			70 - 130	
Chromium (% Recovery)	84.8 %			70 - 130	
Cobalt (% Recovery)	87.5 %			70 - 130	
Copper (% Recovery)	88.5 %			70 - 130	
Iron (% Recovery)	124 %			70 - 130	
Lead (% Recovery)	93.1 %			70 - 130	
Magnesium (% Recovery)	91.0 %			70 - 130	
Manganese (% Recovery)	80 %			70 - 130	
Nickel (% Recovery)	88 %			70 - 130	
Potassium (% Recovery)	90.8 %			70 - 130	
Selenium (% Recovery)	97.0 %			70 - 130	
Silver (% Recovery)	84.7 %			70 - 130	

Sodium (% Recovery)	78.3 %	70 - 130
Thallium (% Recovery)	90.1 %	70 - 130
Vanadium (% Recovery)	86.2 %	70 - 130
Zinc (% Recovery)	94.6 %	70 - 130
Dilution Factor	1	
Analyzed By	Robert Graddy	
Analysis Date/Time	Jun 23 2014 3:22PM	

GFP Slough Background	LIMS ID: 2014-2091
------------------------------	---------------------------

ICP Metals - water (Total) MSD

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Aluminum (% Recovery)	167 %			70 - 130	
Aluminum (RPD)	0.8 %				0 - 20
Antimony (% Recovery)	87.8 %			70 - 130	
Antimony (RPD)	7.2 %				0 - 20
Arsenic (% Recovery)	88.8 %			70 - 130	
Arsenic (RPD)	8.9 %				0 - 20
Barium (% Recovery)	91.9 %			70 - 130	
Barium (RPD)	1.4 %				0 - 20
Beryllium (% Recovery)	96.7 %			70 - 130	
Beryllium (RPD)	0.7 %				0 - 20
Boron (% Recovery)	97.5 %			70 - 130	
Boron (RPD)	0.2 %				0 - 20
Cadmium (% Recovery)	89.9 %			70 - 130	
Cadmium (RPD)	3.0 %				0 - 20
Calcium (% Recovery)	84.6 %			70 - 130	
Calcium (RPD)	1.9 %				0 - 20
Chromium (% Recovery)	88.3 %			70 - 130	
Chromium (RPD)	3.9 %				0 - 20
Cobalt (% Recovery)	89.4 %			70 - 130	
Cobalt (RPD)	2.2 %				0 - 20
Copper (% Recovery)	87.5 %			70 - 130	
Copper (RPD)	1.1 %				0 - 20
Iron (% Recovery)	136 %			70 - 130	
Iron (RPD)	3.6 %				0 - 20
Lead (% Recovery)	95.9 %			70 - 130	
Lead (RPD)	2.1 %				0 - 20
Magnesium (% Recovery)	92.7 %			70 - 130	
Magnesium (RPD)	1.0 %				0 - 20

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Manganese (% Recovery)	93 %	70 - 130	
Manganese (RPD)	3.1 %		0 - 20
Nickel (% Recovery)	89 %	70 - 130	
Nickel (RPD)	1.2 %		0 - 20
Potassium (% Recovery)	88.2 %	70 - 130	
Potassium (RPD)	2.2 %		0 - 20
Selenium (% Recovery)	95.8 %	70 - 130	
Selenium (RPD)	1.2 %		0 - 20
Silver (% Recovery)	83.7 %	70 - 130	
Silver (RPD)	1.2 %		0 - 20
Sodium (% Recovery)	75.1 %	70 - 130	
Sodium (RPD)	1.2 %		0 - 20
Thallium (% Recovery)	95.1 %	70 - 130	
Thallium (RPD)	5.4 %		0 - 20
Vanadium (% Recovery)	90.3 %	70 - 130	
Vanadium (RPD)	4.5 %		0 - 20
Zinc (% Recovery)	91.4 %	70 - 130	
Zinc (RPD)	3.2 %		0 - 20
Dilution Factor	1		
Analysis Date/Time	Jun 23 2014 3:29PM		
Analyzed By	Robert Graddy		

Analytical Quality Control Results Report

Batch: 14062401	ICP Metals - water (Diss.)
<i>GFP Slough Background</i>	<i>LIMS ID: 2014-2091</i>

ICP Metals - water (Dissolved) DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
Aluminum	<20 ug/L	20	20		
Aluminum (RPD)	39.0 %				0 - 20
Antimony (RPD)	0 %				0 - 20
Antimony	<5 ug/L	1	5		
Arsenic	5.06 ug/L	0.2	0.5		
Arsenic (RPD)	6.2 %				0 - 20
Barium (RPD)	4.0 %				0 - 20
Barium	73.2 ug/L	0.4	2		
Beryllium	<0.1 ug/L	0.04	0.1		
Beryllium (RPD)	0 %				0 - 20
Boron (RPD)	16.9 %				0 - 20
Boron	49.3 ug/L	2	5		
Cadmium (RPD)	0 %				0 - 20
Cadmium	<0.1 ug/L	0.05	0.1		
Calcium	22.2 mg/L	0.03	0.03		
Calcium (RPD)	1.9 %				0 - 20
Chromium (RPD)	0 %				0 - 20
Chromium	<0.5 ug/L	0.05	0.5		
Cobalt	<0.5 ug/L	0.05	0.5		
Cobalt (RPD)	183 %				0 - 20
Copper (RPD)	8.8 %				0 - 20
Copper	0.77 ug/L	0.2	0.5		
Iron	<20 ug/L	5	20		
Iron (RPD)	17.8 %				0 - 20
Lead (RPD)	3.3 %				0 - 20
Lead	1.00 ug/L	0.02	0.3		
Magnesium	6.53 mg/L	0.01	0.02		
Magnesium (RPD)	1.7 %				0 - 20
Manganese (RPD)	4.1 %				0 - 20
Manganese	2.5 ug/L	0.07	0.3		
Nickel	<0.5 ug/L	0.15	0.5		
Nickel (RPD)	4.1 %				0 - 20
Potassium (RPD)	1.8 %				0 - 20

Potassium	2.46 mg/L	0.01	0.02	
Selenium	<1 ug/L	0.2	1	
Selenium (RPD)	0.7 %			0 - 20
Silicon Dioxide	5.28 mg/L	0.01	0.05	
Silicon Dioxide (RPD)	3.7 %			0 - 20
Silver (RPD)	0 %			0 - 20
Silver	<0.5 ug/L	0.02	0.5	
Sodium	18.7 mg/L	0.01	0.02	
Sodium (RPD)	2.9 %			0 - 20
Thallium (RPD)	0 %			0 - 20
Thallium	<0.5 ug/L	0	0.5	
Vanadium	1.82 ug/L	0.3	0.5	
Vanadium (RPD)	2.5 %			0 - 20
Zinc (RPD)	23.0 %			0 - 20
Zinc	2.04 ug/L	0.3	1	
Hardness	82 mg/L	1	1	
Hardness (RPD)	2 %			0 - 20
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Jun 23 2014 11:23AM			

GFP Slough Background

LIMS ID: 2014-2091

ICP Metals - water (Dissolved) MS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Aluminum (% Recovery)	97.5 %			70 - 130	
Antimony (% Recovery)	91.6 %			70 - 130	
Arsenic (% Recovery)	83.4 %			70 - 130	
Barium (% Recovery)	88.0 %			70 - 130	
Beryllium (% Recovery)	89.0 %			70 - 130	
Boron (% Recovery)	93.7 %			70 - 130	
Cadmium (% Recovery)	92.5 %			70 - 130	
Calcium (% Recovery)	85.2 %			70 - 130	
Chromium (% Recovery)	83.1 %			70 - 130	
Cobalt (% Recovery)	83.8 %			70 - 130	
Copper (% Recovery)	83.9 %			70 - 130	
Iron (% Recovery)	81.4 %			70 - 130	
Lead (% Recovery)	89.5 %			70 - 130	
Magnesium (% Recovery)	84.5 %			70 - 130	
Manganese (% Recovery)	82 %			70 - 130	

Nickel (% Recovery)	83 %	70 - 130
Potassium (% Recovery)	86.2 %	70 - 130
Selenium (% Recovery)	96.7 %	70 - 130
Silver (% Recovery)	81.9 %	70 - 130
Sodium (% Recovery)	74.2 %	70 - 130
Thallium (% Recovery)	89.2 %	70 - 130
Vanadium (% Recovery)	83.8 %	70 - 130
Zinc (% Recovery)	86.6 %	70 - 130
Dilution Factor	1	
Analyzed By	Robert Graddy	
Analysis Date/Time	Jun 23 2014 11:29AM	

GFP Slough Background	LIMS ID: 2014-2091
------------------------------	---------------------------

ICP Metals - water (Dissolved) MSD

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Aluminum (% Recovery)	98.3 %			70 - 130	
Aluminum (RPD)	0.8 %				0 - 20
Antimony (% Recovery)	91.6 %			70 - 130	
Antimony (RPD)	0 %				0 - 20
Arsenic (% Recovery)	85.9 %			70 - 130	
Arsenic (RPD)	2.2 %				0 - 20
Barium (% Recovery)	87.8 %			70 - 130	
Barium (RPD)	0.2 %				0 - 20
Beryllium (% Recovery)	89.8 %			70 - 130	
Beryllium (RPD)	1.0 %				0 - 20
Boron (% Recovery)	94.3 %			70 - 130	
Boron (RPD)	0.5 %				0 - 20
Cadmium (% Recovery)	91.1 %			70 - 130	
Cadmium (RPD)	1.5 %				0 - 20
Calcium (% Recovery)	86.3 %			70 - 130	
Calcium (RPD)	0.4 %				0 - 20
Chromium (% Recovery)	83.0 %			70 - 130	
Chromium (RPD)	0.1 %				0 - 20
Cobalt (% Recovery)	83.4 %			70 - 130	
Cobalt (RPD)	0.5 %				0 - 20
Copper (% Recovery)	83.4 %			70 - 130	
Copper (RPD)	0.5 %				0 - 20
Iron (% Recovery)	81.5 %			70 - 130	
Iron (RPD)	0.1 %				0 - 20

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Laboratory Contact: Jeff Ruehr
Ruehr@adeq.state.ar.us
501-682-0955

Lead (% Recovery)	89.8 %	70 - 130
Lead (RPD)	0.3 %	0 - 20
Magnesium (% Recovery)	85.0 %	70 - 130
Magnesium (RPD)	0.3 %	0 - 20
Manganese (% Recovery)	82 %	70 - 130
Manganese (RPD)	0.2 %	0 - 20
Nickel (% Recovery)	83 %	70 - 130
Nickel (RPD)	0.5 %	0 - 20
Potassium (% Recovery)	85.6 %	70 - 130
Potassium (RPD)	0.5 %	0 - 20
Selenium (% Recovery)	95.8 %	70 - 130
Selenium (RPD)	0.9 %	0 - 20
Silver (% Recovery)	81.7 %	70 - 130
Silver (RPD)	0.3 %	0 - 20
Sodium (% Recovery)	74.3 %	70 - 130
Sodium (RPD)	0 %	0 - 20
Thallium (% Recovery)	88.3 %	70 - 130
Thallium (RPD)	1.0 %	0 - 20
Vanadium (% Recovery)	83.9 %	70 - 130
Vanadium (RPD)	0.1 %	0 - 20
Zinc (% Recovery)	87.2 %	70 - 130
Zinc (RPD)	0.6 %	0 - 20
Dilution Factor	1	
Analyzed By	Robert Graddy	
Analysis Date/Time	Jun 23 2014 11:36AM	

Analytical Quality Control Results Report

Batch: 14063004	TSS - water
<i>GFP Slough Background</i>	<i>LIMS ID: 2014-2091</i>

Solids, Total Suspended - water DUP

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids	18 mg/L	1	1		
Total Suspended Solids (RPD)	0 %				0 - 20
Analyzed By	Chad Carrington				
Analysis Date/Time	6/25/2014 13:00				

MB	LIMS ID: 14063004-MB-01
-----------	--------------------------------

Solids, Total Suspended - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids	<1 mg/L	1	1		
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

LCS	LIMS ID: 14063004-LCS-01
------------	---------------------------------

Solids, Total Suspended - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids (% Recovery)	95.5 %			90 - 110	
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

MB	LIMS ID: 14063004-MB-02
-----------	--------------------------------

Solids, Total Suspended - water MB

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids	<1 mg/L	1	1		
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

LCS	LIMS ID: 14063004-LCS-02
------------	---------------------------------

Solids, Total Suspended - water LCS

Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
-----------	--------	----	----	------------------	-------------------

Total Suspended Solids (% Recovery)	98.5 %	90 - 110
Analyzed By	Robert Graddy	
Analysis Date/Time	6/25/2014 07:30	

MB	LIMS ID: 14063004-MB-03
-----------	--------------------------------

Solids, Total Suspended - water MB Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids	<1 mg/L	1	1		
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

LCS	LIMS ID: 14063004-LCS-03
------------	---------------------------------

Solids, Total Suspended - water LCS Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids (% Recovery)	99.5 %			90 - 110	
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

MB	LIMS ID: 14063004-MB-04
-----------	--------------------------------

Solids, Total Suspended - water MB Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids	<1 mg/L	1	1		
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

LCS	LIMS ID: 14063004-LCS-04
------------	---------------------------------

Solids, Total Suspended - water LCS Run: 1

Parameter	Result	DL	RL	Accuracy Control	Precision Control
Total Suspended Solids (% Recovery)	104 %			90 - 110	
Analyzed By	Robert Graddy				
Analysis Date/Time	6/25/2014 07:30				

McCabe, Kerri

From: Ken Johnson <Ken@pbwastewater.com>
Sent: Wednesday, August 06, 2014 2:27 PM
To: McCabe, Kerri
Cc: Vincent Miles
Subject: FW: ADEQ
Attachments: ADEQ Inspection Report Reply 14.pdf



Ken Johnson,
General Manager
Pine Bluff Wastewater Utility
1520 S Ohio Street
Pine Bluff, AR 71601
Tel: 870-535-6603
Fax: 870-535-6243

<mailto:ken@pbwastewater.com>

<http://www.pbwastewater.com/>

PINE BLUFF WASTEWATER UTILITY

1520 S. OHIO ST. • PINE BLUFF, ARKANSAS 71601-6055 • PHONE: (870) 535-6603 • FAX (870) 535-6243

August 04, 2014

Kerri McCabe, Inspector Supervisor
AR Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-3517

RE: Boyd Point WWTP Inspection (Jefferson Co.)
AFIN: 35-00149 NPDES Permit No: AR0033316

Dear Ms. McCabe,

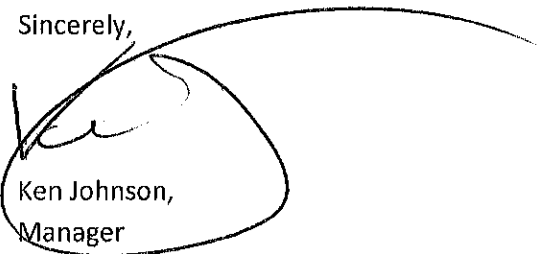
We are in receipt of your inspection report dated June 29, 2014. In accordance with this report, Pine Bluff Wastewater Utility (PBWU) is required to provide a written response to the items listed. Our responses to the "Summary of Findings" of your report is as follows:

1. On June 11, 2014, Pine Bluff Wastewater Utility was notified by an employee of Graphic Flexible Packaging (GFP) concerning a leak on our 30 inch force main. The PBWU personnel arrived on site and immediately began taking actions required to repair the force main. To facilitate the repair and minimize any additional wastewater leakage, our crews re-routed the wastewater flow through our collection system. However; due to high grass and other vegetation, we were unaware that wastewater (associated with the leak) may have entered an unnamed slough on GFP property.
2. On June 18, 2014, Steve Henderson (District 6 Inspector) met with representatives from Graphics Flexible Packaging and Pine Bluff Wastewater Utility. Per our observation, an odor was recognized as common to wastewater; however, no noticeable solids were present. There were several openings (recently cut) along the slough that allowed personnel to collect samples for analysis. Inspector Henderson recommended that PBWU initiate activities of pumping water from GFP property to transport to our collection system.
3. According to the data from your inspection report dated June 29, 2014, we ascertained that samples were submitted by GFP personnel for fecal coliform. As aforementioned, PBWU was actively pumping water from the GFP property. PBWU crews actively pumped, hauled and disposed of approximately 180,000 gallons of water over several days. On June 25, 2014, a GFP employee informed PBWU that we were to halt stationing our equipment on their property; therefore, pumping efforts were discontinued.

In summary, Pine Bluff Wastewater Utility crews responded in an expeditious manner and worked many manpower hours. PBWU expensed nearly \$56K toward this emergency repair. In our experiences, we have never seen a pipe that had opening on the bottom of the line which allowed sewage to seep out from underneath the pipe. With that in mind, PBWU had multiple soil analyses performed. Those results indicate that adverse soil conditions may have compromised our sewer line.

If there are any questions or concerns pertaining to this matter, please contact me at (870) 535-6603.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Johnson", is written over a large, hand-drawn oval. The signature is cursive and somewhat stylized. The oval is also hand-drawn and extends to the right, partially overlapping the signature.

Ken Johnson,
Manager

Cc: Vincent Miles, E.C. Supervisor.

ADEQ

A R K A N S A S
Department of Environmental Quality

August 7, 2014

Ken Johnson, Manager
Pine Bluff Wastewater Utility - Boyd Point
1520 S Ohio St
Pine Bluff, AR 71601

Re: Response to Boyd Point WWTP Inspection (Jefferson Co)
AFIN: 35-00149 NPDES Permit No.: AR0033316

Dear Mr. Johnson:

I have reviewed the response pertaining to the June 20, 2014 inspection of the above-referenced facility. The information provided sufficiently addresses the violations referenced in the inspection report. At this time, the Department has no further comment concerning this particular inspection. Acceptance of this response by the Department does not preclude any future enforcement action deemed necessary at this site or any other site.

If we need further information concerning this matter, we will contact you. Thank you for your attention to this matter. Should you have any questions, feel free to contact me at (501) 682-0642 or you may e-mail me at mccabe@adeq.state.ar.us.

Sincerely,



Kerri McCabe
Inspector Supervisor
Water Division