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December 20, 2017

Ms. Jacqueline Trotta
Enforcement Analyst
Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Re: CAO-LIS-08-083
AFIN 32-00044

Dear Ms. Trotta:

The City of Batesville offers the following report of required activities set out in the above-captioned Consent Administrative Order.

Main Pump Station Construction

The main pump station was brought to substantial completion by the wastewater treatment plant contractor on October 2, 2015. Additional work needed to be completed by the contractor to bring the pump station online. The pump station was brought online and placed into service on January 18, 2016. The pump station continues in service and has been evaluated through a one-year project performance period required by ANRC as a condition of our revolving loan. The new main pump station continues to work without issues requiring remediation.

Mainline Construction

Plans and specifications for Contract Section 3 (CS3) were submitted to ANRC and the Arkansas Department of Health for their review and approval in March 2014. These plans were approved by both departments as of June 2014.

In order to bring the main pump station online, a portion of the mainline construction known as CS3 was split out for separate contract. This work was required to build a portion of the main line and complete critical connections to divert the total flow into the new main pump station through the new interceptor sewers constructed under Contract Section 1 (CS1). That contract was completed at a cost of over \$300,000 and will become an essential element as a starting place for the future CS3 mainline construction which should approached \$10 million in construction cost.

The City has procured most of the easements required for the construction of the remaining work under CS3, however a significant section of easements was required from the Union Pacific Railroad (UPRR) along the proposed construction route. The City was unable to secure an easement from UPRR for this section of mainline construction. After a substantial period of negotiation, UPRR consented to the possibility of purchasing the subject property required for the construction of the CS3 mainline. The negotiations required extensive property surveys and research dating back to procurements in the mid-1800s. Additional requirements were made by UPRR for environmental analysis of the property. Following the completion of those studies, reports and subsequent contract language, the City closed on the property in August 2017.

Having completed the purchase of the Union Pacific property, the City is now in a position to complete the procurement of the remaining easements that could have been affected by major reroutes of the construction of the mainline had the City not been successful securing the property from UPRR. It is anticipated that these easements should be procured so that CS3 can go to bid in the spring of 2018.

Sewer System Rehabilitation by Contract

Following the successful bidding process for CS3, the City will evaluate the funds available after having established the cost of construction and the remaining funds available for a construction contract for sewer system rehabilitation. Certain lines that are scheduled to be rehabilitated in the vicinity of the CS3 mainline construction will be replaced in order to make tie-ins to the existing system. Further evaluation of these tie-ins made as a part of CS3 will likely have the impact of reducing the amount of rehabilitation by separate contract.

Rehabilitation of Private Service Lines

A summary table of the rehabilitation identified in the SSES is shown in Attachment 1. The lower section of that table identifies 288 items of rehabilitation on private and municipal service lines. The City has completed the rehabilitation of 215 of those identified items. The remaining 73 items of repair are likely on private property. The City is reviewing its legal authority to require that private service lines be repaired by the owner of the private property. That review process and subsequent repairs by private owners is anticipated to be completed by December 2019.

Sewer System Rehabilitation by City Forces

The City proposed to complete certain mainline repairs with City forces for two basins. This work was outlined in our letter report of January 2015. Attachment 2 is a table showing a summary of the municipal mainline construction by City forces, principally in Basins 7 and 11. The City has constructed 36,045 linear feet of mainline sewer system in 2017. A small portion of that footage, 662 feet, was made in Basin 13 while major defects were found during routine system maintenance.

The City's planned construction in Basin 11 has been totally completed and is shown on Attachment 3. The planned reconstruction in Basin 7 is nearly complete, with only 3,748 linear feet remaining to be constructed. The progress of work in Basin 7 is shown on Attachment 4. The completed work versus the remaining mainline construction is color-coded on Attachment 4. It is anticipated that this sewer system rehabilitation by City forces will be completed, as scheduled, by December 2018.

Sewer System Effectiveness Evaluation

The City proposes to defer the sewer system effectiveness evaluation until the completion of all items of work set out in Attachment 1. It is anticipated that the likely completion date would be in late 2023.

Assess Remedial Action/Additional Facility to Contained Peak Flows

The City is in a continual process of evaluating the effectiveness of remedial actions of rehabilitation and mainline construction. Analysis performed during the project performance period required by ANRC has demonstrated a significant reduction of peak flows compared with those existing prior to the construction of the new mainline replacements in previous projects. The completion of the mainline construction in Basin 5 set out in our January 2015 report, together with the main pump station construction and mainline

construction of CS1, have significantly reduced the peak flows into the wastewater treatment plant. Attachment 5 is an excerpt from the project performance report submitted to ANRC which shows the effectiveness of the mainline construction and rehabilitation in reducing peak flows. Attachment 6 contains a table showing sewer system overflows during 2017. Only one of these SSO occurrences is related to infiltration/inflow, and that amount was only 100 gallons. The City's efforts at mainline construction and sewer system rehabilitation are already showing a very significant impact on the reduction of extraneous flows.

Revised Milestone Schedule

Based on the evaluation of the progress and the prospects of future construction and sewer system rehabilitation, the City proposes the following revised milestone schedule:

Action Item	Anticipated Milestone Date
Mainline Construction	November 2020
Sewer System Rehabilitation by Contract	December 2022
Rehabilitation of Private Service Lines	December 2019
Sewer System Rehabilitation by City Forces	December 31, 2018
Sewer System Effectiveness Evaluation	September 2023
Assess Remedial Action/Additional Facilities to Contain Peak Flows	July 2024

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The City of Batesville continues to place priority on the remediation of sewer system defects and the goal of mitigating sewer system overflows. To date our commitment of expenditures are in excess of \$60 million. We trust that this report is acceptable to the Department. If you have any questions, please feel free to call Damon Johnson, our City Engineer at 870-698-2400, extension 208.

Sincerely,



Rick Elumbaugh
Mayor

cc: City Council Members
Mr. Damon Johnson, P.E., Batesville City Engineer
Richard Dawson, P.E., ANRC
Pris Houchens, ANRC
James C. Ulmer, P.E., MWY

Attachment 1

Sewer Rehab Manhole Rehabilitation Per SSES			
	Occurrences	Responsible Party	Status
Rehab 1001: Raise Manhole - Unpaved	28	BWU	Complete
Rehab 1002: Raise Manhole - Paved	3	BWU	Complete
Rehab 1010: Install Manhole Insert	701	BWU	Complete
Rehab 1015: Install Chimney Seal	10		6
Rehab 1020: Realign and Grout Casting - Unpaved	183	BWU	154
Rehab 1021: Realign and Grout Casting - Paved	36	BWU	32
Rehab 1022: Replace Manhole Ring & Cover - Unpaved	70	BWU	67
Rehab 1023: Replace Manhole Ring & Cover - Paved	4	BWU	Complete
Rehab 1024: Replace Manhole Lid	8	BWU	Complete
Rehab 1040: Clean Manhole, and Coat - <6 Feet Deep	195	Contractor	1
Rehab 1041: Clean Manhole, and Coat - >6 Feet Deep	195	Contractor	
Rehab 1043: Clean Manhole Wall Lift Holes	60	BWU	27
Rehab 1047: Repair Manhole Pipe Seals	396	BWU	219
Rehab 1055: Remove Manhole Steps, Stop I/I and Repair	6	BWU	2
Rehab 1110: Repair Manhole Bench and Trough	76	BWU	68
Rehab 1205: Repair Manhole Chimney and Coat	111	Contractor	
Sewer Rehab Mainline Rehabilitation Per SSES			
	Occurrences	Responsible Party	Status
Rehab 5010: Clean and CCTV	8	BWU	Complete
Rehab 5000: Clean Mainline	78	BWU	Complete
Rehab 4510: Cured in Place Lining or Replace	153	Contractor	
Rehab 4360: Point Repair	17	BWU	16
Rehab 4430: Replace Mainline	229	50-60% BWU	In Process
Other	2		
Sewer Rehab Service Line Rehabilitation Per SSES			
	Occurrences	Responsible Party	Status
Rehab 3350: Disconnect Abandoned Service Line at Property	4	BWU	Complete
Rehab 3390: Disconnect Area Drain	2	BWU	In Process
Rehab 3360: Point Repair on Municipal Service Line	9	Property Owner	In Process
Rehab 3360: Point Repair on Private Service Line	53	Property Owner	In Process
Rehab 3340: Repair Broken Cleanout	86	BWU	Complete
Rehab 3330: Replace Missing Cleanout Cap	123	BWU	Complete
Rehab 3400: Replace Section of Service Line	11	Property Owner	In Process
Updated 12/12/17			

Attachment 1

Sewer Rehab Yearly Footage Report 2017

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Yearly
Total footage of 6" Clay mainline replaced by 6" PVC main Basin 7:	166	1507	317	272	2262
Total footage of 6" Clay mainline replaced by 8" PVC main Basin 7:	0	0	0	257	257
Total footage of 8" Clay mainline replaced by 8" PVC main Basin 7:	0	338	401	350	1089
Total footage of 6" Clay mainline replaced by 8" DI main Basin 7:	0	0	0	80	80
Total footage of 6" Clay mainline replaced by 6" PVC main Basin 11:	36	0	278	0	314
Total footage of 6" Clay mainline replaced by 8" PVC main Basin 11:	0	0	14	0	14
Total footage of 8" Clay mainline replaced by 8" PVC main Basin 11:	344	0	0	0	344
Total footage of 10" Clay mainline replaced by 12" PVC Basin 11:	0	0	98	0	98
Total footage of 6" Clay mainline replaced by 6" PVC main Basin 13:	0	0	180	482	662
Total number of manholes poured Basin 13:	0	0	2	2	4
Total number of manholes poured Basin 11:	4	0	2	0	6
Total number of manholes poured Basin 7:	0	10	6	6	22
Total number of manholes poured All Basins:	32				
Total Footage of Pipe:	546	1845	1108	959	5120

Surplus

2015: 1319 Ft.
 2016: 66 Ft.
 Total Surplus: 1385 Ft

Year Total

120 Ft. Per Week
 6240 Ft. Per Year

Pipeline Analysis Shows: 30215 Ft

What we have Installed: 36045 Ft.

What is Left to Install: 3748 Ft.

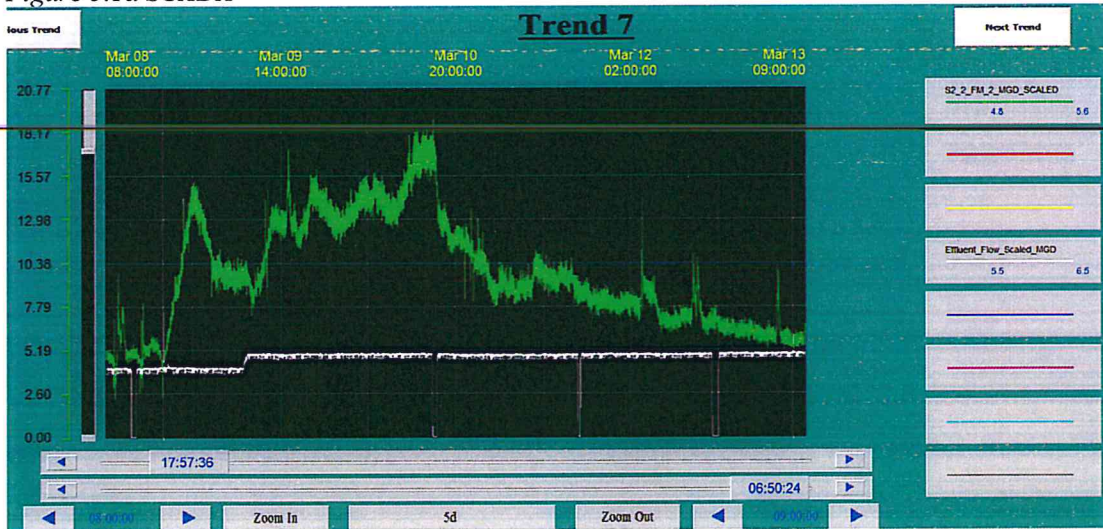
Updated 12/13/17

5.1 Influent Flow Measurement & Screw Pumps

The inlet facility: structure, building, comminutors, and 3-ft Parshall flume all appear to be functioning properly. Each of the screw pumps and float controls are working well when operational.

A series of rain events occurred beginning on March 8, 2016 and continuing through March 14, 2016. A graphical depiction of these rainfall events is shown on the Graph 2.2.4 Mass Curve of Section 2.2.4. The total rainfall through day three of this seven-day event was 3.16 inches. At the end of the seven-day event, the total rainfall was 4.11 inches. A SCADA graph depicting the influent flow is shown in Figure 5.1a. The scooter bar shows the onset of the increased flow at approximately 6 PM on March 8. The flow rate transitioned from 4.8 million gallons per day to approximately 18.0 million gallons per day on March 10. The design capacity of each screw pump is 22.5 MGD, and it appears from the SCADA that only one screw pump ran at any one period of time.

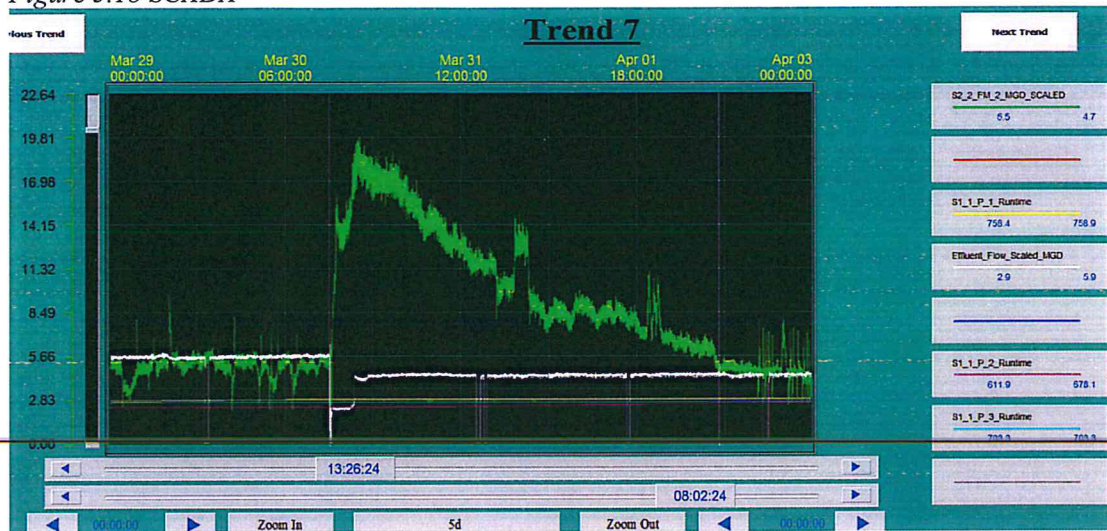
Figure 5.1a SCADA



Attachment 5

A similar large rainfall event occurred on March 30 and 31. The total rainfall from this event was 4.47 inches, with 4.45 inches of the storm falling on the first day. The influent flow from that event is shown on the SCADA graph of Figure 5.1b. During this event the influent flow transitioned from a rate of 5.5 million gallons per day to approximately 19.75 million gallons per day. During this second rainfall event, again only one screw pump was in operation.

Figure 5.1b SCADA



Attachment 6

Summary Report Code Descriptors											
Cause(s) of SSO		SSO Impact		Action(s) Taken		Ultimate Discharge Location					
CO-Construction	D-Debris	NEAH-No Evidence of Adverse of 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			
Hill & Carter	1-189	1/9/2017	1/9/2017	20	D	NEAH	EC, HC	GR			
Main & St. Louis	2-109	1/10/2017	1/10/2017	200	D	NEAH	EC, HC	DI			
Main & Highland	2-92	1/18/2017	1/18/2017	100	R	NEAH	EC, HC	GR			
287 N. 11th st.	No#	1/22/2017	1/22/2017	20	R,D	NEAH	EC, HC	GR			
2725 Shade Tree	060087A	1/29/2017	1/29/2017	15	D	NEAH	EC, HC	GR			
12 Alta Vista	No #	2/1/2017	2/1/2017	200	RG	NEAH	EC, HC	GR			
Sun Valley & Arnold st.	1-265	2/8/2017	2/8/2017	8	RG	NEAH	EC, HC	DI			
14th & Porter	2-232B	2/16/2017	2/16/2017	25	RG	NEAH	EC, HC	GR			
660 River st	2-42	3/7/2017	3/7/2017	100	I&J	NEAH	HC, EC	DI			
1790 Myers Ave.	4-1F	3/17/2017	3/17/2017	8000	E- Plug Failure	NEAH	EC	GR			
411 S. Central	2-399	3/27/2017	3/27/2017	100	R	NEAH	EC	DI			
388 Bluffview	7-16A	4/3/2017	4/3/2017	140	RG	NEAH	EC	DI			
Bayou Line Behind Charles st.	1-13	4/27/2017	5/3/2017	10000	R	NEAH	EC	GR			
2375 Goff Dr.	6-17	5/4/2017	5/4/2017	50	R	NEAH	EC	GR			
909 25th st.	Cleanout	5/9/2017	5/9/2017	40	D	NEAH	EC	GR			
1820 Highland	Cleanout	6/5/2017	6/5/2017	10	R	NEAH	HC, EC	GR			
2501 Case St.	5-37	8/11/2017	8/11/2017	200	R,G	NEAH	HC	GR			
1740 Arch st.	1-267A	10/5/2017	10/5/2017	30	D	NEAH	EC, HC	GR			
13 Wildwood	050099	10/18/2017	10/18/2017	20	G	NEAH	EC, HC	GR			
30th & Josephine	5-52	11/3/2017	11/3/2017	50	RG	NEAH	HC, EC	GR			
150 George st.	020104AA	11/13/2017	11/13/2017	50	D	NEAH	HC, EC	GR			