



ETC Engineers & Architects, Inc.

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■ 1510 SOUTH BROADWAY, LITTLE ROCK, AR 72202 ■ PHONE 501-375-1786 ■ FAX 501-375-1277 ■

January 31, 2018

Mr. Layne Pemberton
Enforcement Analyst
Enforcement Branch
ADEQ Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72118

RECEIVED
JAN 31 2018
Rn 2.55

Ref: City of Forrest City; Permit No.: AR0020087
Comprehensive CAP Report per Item 1 of CAO

Dear Mr. Pemberton,

In accordance with the recent Consent Administrative Order (CAO) signed by the City of Forrest City, the City is required to submit a comprehensive Corrective Action Plan (CAP) to correct the violations described in paragraph 14 and 20 of the CAO, developed by a Registered Professional Engineer in the State of Arkansas. The City has retained our services to review these violations and develop appropriate Corrective Action Plans.

Paragraph 14 of the CAO lists four violations. They are as follows:

- a. The Turner Pump Station Wet Well contained heavy amount of grease, floating solids, and debris.
- b. The Malory Pump Station had only one pump that was operational.
- c. The Prison Pump Station Grinder was not operational.
- d. A significant amount of erosion was evident on the levees of the North equalization basin. This violation was previously cited on two different inspection reports.

My review of the above violations and proposed CAPs are as follows:

1. Turner Pump Station:

- a. Turner Street Pump Station wet well condition was first noted in April 20, 2016 ADEQ inspection report (see attachment 14-1). The wet well condition was attributed to inadequate Operation & Maintenance.
- b. On April 20, 2016, FCWU submitted a non-compliance report (see attachment 14-2).

BUILDING A BETTER WORLD

■ e-mail: etc@etcengineersinc.com ■



- c. The pump station belongs to the local Housing Authority and is located within the Housing Authority property. There have been ongoing issues with the Housing Authority regarding the large amount of grease that is released by the residents. Despite Housing Authority's many measures, the situation persists.
- d. When necessary the Housing Authority employs a private contractor with vacuum trucks to pump out the grease and floating debris.
- e. FCWU has been in discussion with the Housing Authority to install an appropriately sized grease trap which will be cleaned by a private contractor on a regular schedule.
- f. In the non-compliance report FCWU reported that the pump station was cleaned out within a week of the ADEQ inspection.
- g. The steps taken by the FCWU to remedy the violation are as follows:
 - i. The Pump Station was cleaned thoroughly within a week of the reported violation.
 - ii. FCWU continues to work with the Housing Authority to operate and maintain the station in appropriate condition.
 - iii. The Housing Authority has retained the services of an "on-call" commercial vacuum cleaning service to provide removal service as and when needed.
 - iv. The Housing Authority is involved in educating the residents on appropriate grease disposal methods.
 - v. FCWU is in the talks with the Housing Authority to install an appropriately sized grease trap.
- h. In conclusion, I see no need for any immediate additional corrective actions. FCWU has been monitoring the pump station on a routine basis and will continue to do so to avoid any future grease and debris build up.

2. Mallory Pump Station:

- a. On April 20, 2016 ADEQ staff noted on their inspection report (see attachment 14-1) that only one pump was operational at the Mallory Pump Station.
- b. FCWU submitted a non-compliance report on the violations on April 20, 2016 (see attachment 14-3).
- c. In the non-compliance report FCWU concurred that on the date of the inspection only Pump #1 was operational at the Mallory Pump Station. Pump #2 and #3 were out of service.
- d. Pump #2 had a bearing failure and was waiting for parts to be repaired.
- e. Pump #3 was out of service because of a blockage that could not be cleared immediately for unknown reasons.

- f. Parts for repair of Pump #2 arrived on 5/18/2016. However, pump shims did not arrive with the pump parts. Therefore, even though parts were available, without pump shims the pump remained idle.
- g. FCWU staff were finally able to unblock Pump #3 and put it back to operation on 5/18/2016.
- h. Pump #2 was eventually repaired a week later and put to operation.
- i. All three pumps are currently operational. FCWU has instituted a preventive maintenance protocol to minimize such failures.
- j. In conclusion, since all three pumps are currently operational, I see no need for any immediate additional corrective actions. However, FCWU will adopt the following measures to manage the operation of this and other pump stations in a more deliberate manner:
 - i. FCWU will ensure adherence to the system wide O&M manual for proper maintenance measures at all pump stations.
 - ii. Based on the O&M manual FCWU will be more proactive in scheduling preventive and curative maintenance procedures to avoid any future similar occurrence thereby avoid any permit violations.
 - iii. FCWU's current organizational structure allows line supervisors to have defined responsibilities that includes overseeing of the scheduled maintenance tasks and follow through after the completion of the task. The FCWU administration will become more proactive in managing line supervisors to ensure their effectiveness in supervising maintenance tasks.
 - iv. FCWU will consider acquiring auxiliary portable pumps for temporary placement.
 - v. FCWU has already increased their current parts inventory to include some of the common parts needed for repair at this pump station including pump shims.

3. Prison Pump Station:

- a. On April 20, 2016 ADEQ staff noted on their inspection report (see attachment 14-1) that the grinder was not operational at this pump station causing frequent overflows. Evidence of a recent overflow event was observed at the Prison Pump Station.
- b. FCWU submitted a non-compliance report on the violation on April 20, 2016 (see attachment 14-2).
- c. This pump station has two submersible pumps. Both pumps were damaged due to floating debris introduced into the sewage by the prison population. The debris generally consists of clothing, bedsheets, blankets etc. These materials clog the grinder and cause overflows.

- d. There is a backup pump at the station which was also clogged by the foreign objects on the day of the inspection. The backup pump was repaired and put back into operation within an hour of the overflow.
- e. The overflow area was cleaned and disinfected promptly.
- f. The backup pump remained in operation during the entire time when the primary pumps were out of service.
- g. The pump station belongs to the Federal Bureau of Prisons (FBP) and is located in their property.
- h. FCWU operates and maintains the station through a long term O&M contract with the FBP.
- i. FCWU had been in discussion with the FBP to change the terms of the maintenance agreement.
- j. Since the incident FBP has taken over the operation and maintenance of the station themselves and as such FCWU has no obligations to provide O&M services for this facility. FBP uses in-house staff as well as contract services to manage the station.
- k. FCWU staff monitors the discharge from this pump station at the receiving point only.
- l. In conclusion, since FCWU has no further responsibilities regarding this pump station operation and maintenance and the pump station is located within the Federal Prison property, I see no need for proposing any immediate additional corrective actions. All necessary corrective action will have to be performed by the FBP.
- m. FCWU will have no reporting responsibilities regarding this pump station in the future. FBP will be the responsible party.

4. Significant Erosion on the Levee of the North EQ Basin

- a. On April 20, 2016 ADEQ staff noted on their inspection report (see attachment 14-4) that there was a significant amount of erosion on the levees of the North EQ Basin. This violation was noted in previous inspection reports as well.
- b. FCWU submitted a non-compliance report on the violation on April 20, 2016 (see attachment 14-5).
- c. FCWU has been working on the levee as part of their ongoing facility maintenance program.
- d. The Non-compliance report provided details of various activities that were taking place as part of the overall Equalization Basin maintenance program.
- e. Levee repair required draining of the 70 acre basins. Which in turn required installation of an isolation valve since it was not incorporated in the original design.
- f. Needless to say, the levee repair process was time consuming and costly.

- g. The project has since been completed.
- h. On November 20, 2017 a certificate of final completion of the levee repair work was provided to the ADEQ.
- i. In conclusion, since the levee repair work has been completed, I see no need for any immediate additional corrective actions.

Paragraph 20 of the CAO lists six violations of the permitted effluent discharge limits. They are as follows:

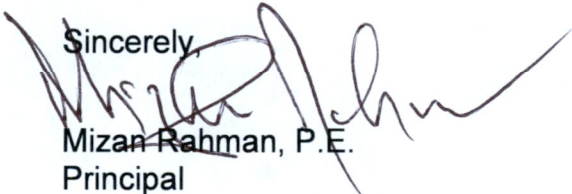
- a. Two violations for total suspended solids
- b. One violation of Fecal Coliform
- c. Two violations of BOD
- d. One violation of Ammonia Nitrogen

My review summary of the above violations are as follows:

In our earlier letter dated January 17, 2018, we have provided a detailed CAP regarding the above violations. On January 22, 2018 ADEQ responded by accepting the proposed CAP and therefore, in my opinion no further actions are necessary.

We will continue to submit reports as outlined in the CAO. Please feel free to contact me if you need additional clarifications. I can be contacted at 501-375-1786.

Sincerely,




Mizan Rahman, P.E.
Principal

CC: Mayor Larry Bryant, City of Forrest City
Mr. Calvin Murdock, Manager, Forrest City Water Utility

SSO
14-1

Inspection Report: Forrest City WWTP, AFIN: 62-00070, Permit #: AR0020087

 AR K A N S A S Department of Environmental Quality		WATER DIVISION INSPECTION REPORT		
		AFIN: 62-00070	PERMIT #: AR0020087	DATE: 4/20/2016
		COUNTY: 62 St. Francis	PDS #: 090730	MEDIA: WN
GPS LAT: 34.997413 LONG: -90.835236 LOCATION: Entrance				
FACILITY INFORMATION		INSPECTION INFORMATION		
NAME: Forrest City WWTP LOCATION: Approximately 3 miles West of Forrest City, at the end of SFC 209 CITY: Forrest City, AR 72336		FACILITY TYPE: 1 - Municipal	INSPECTOR ID#: 26075 S - State	
		FACILITY EVALUATION RATING: 1 - Unsatisfactory	INSPECTION TYPE: SSO/Collection System	
RESPONSIBLE OFFICIAL		DATE(S): 4/20/2016	ENTRY TIME: 09:00	EXIT TIME: 12:00
NAME / TITLE: W. H. Calvin Murdock, / Manager COMPANY: Forrest City WWTP MAILING ADDRESS: 303 North Rosser, P.O. Box 1074 CITY, STATE, ZIP: Forrest City, AR 72336 PHONE & EXT. / FAX: 870-261- 1424 / EMAIL:				PERMIT EFFECTIVE DATE: 8/1/2012 PERMIT EXPIRATION DATE: 7/31/2017
		FAYETTEVILLE SHALE RELATED: N		
		FAYETTEVILLE SHALE VIOLATIONS: N		
		INSPECTION PARTICIPANTS		
		NAME/TITLE/PHONE/FAX/EMAIL/ETC.: Joel Theftford, Class III Operator, #05326, 870-270-0201		
CONTACTED DURING INSPECTION: No				
AREA EVALUATIONS				
(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Applicable/Evaluated)				
S	PERMIT	N	FLOW MEASUREMENT	N
S	RECORDS/REPORTS	N	LABORATORY	U
U	OPERATION & MAINTENANCE	N	EFFLUENT/RECEIVING WATER	U
S	SAMPLING	N	SLUDGE HANDLING/DISPOSAL	N
N	OTHER:			
SUMMARY OF FINDINGS				
At the time of inspection, the following violation was noted: 1. Part III, SECTION B, Item 1A; Inadequate Operation and Maintenance.				
<ul style="list-style-type: none"> Specifically, the Turner Pump Station Wet Well contained heavy amounts of grease, floating solids, and debris. The Mallory Pump Station had only one pump that was operational. The Prison Pump Station Grinder is not operational causing frequent overflows. Evidence of a recent overflow event was observed at the Prison Pump Station. 				
GENERAL COMMENTS				
Due to heavy infiltration during rain events of the collection system, the EQ basins are being stressed causing major erosion to the integrity of the lagoon levees. According to the operator, the facility normally takes in approximately 2-3 MGD of wastewater. During heavy rain events, it can rise to approximately 20 MGD.				
INSPECTOR'S SIGNATURE: <i>Steven L. Henderson</i>		Steven L. Henderson		DATE: 4/29/2016
SUPERVISOR'S SIGNATURE: <i>Kerri McCabe</i>		Kerri McCabe		DATE: 5/16/2016

14-2

To ADEQ

Attn: Steven Henderson

From: City of Forrest City

This report is in response to the findings of your inspection that was done on 04/20/2016. The inspections were performed at Turner Pump station, and the Federal prison Pump station, which are currently assigned to the collections department.

The findings were as follows the Turner station was found to have heavy amounts of grease and floating solids as well as debris. The station was treated and cleaned within the week of the findings; there has been an ongoing process of working with the local housing authority which the station is on their property, and owned by the housing authority as well. There is an ongoing problem with the large amounts of grease and debris that is produced from the housing complex that inadvertently flows into the lift station. Different measures are constantly taken to try and prevent the large amounts of grease and foreign materials from entering the pump station. When available a private contractor suctions the debris and grease out of the pit.

The other station in question is the Prison station, the issue arose due to both of the primary submersible pumps were damaged and inoperable about the same time period, due the heavy amounts of bed sheets, blankets, batteries that are being processed through the system. The primary pumps are in the process of being repaired and will be placed back in service once they are repaired, to help alleviate the overflow issue. The Federal Bureau of Prisons owns the facility, not the water utility. There is an ongoing issue with the prison providing replacement parts for the facility. There is a 6" backup pump that is currently being used to keep the system operational. At the time of the inspection the system was inundated with a lot of bedsheets and the grinder couldn't handle the load, and some of the material clogged the backup pump. The system was brought back up to working order within the hour of the system failure. The area was then cleaned and disinfected the same day as the overflow. The system is monitored every day, and at night during the peak use hours and as well as the off peak hours to help prevent any future incidents.

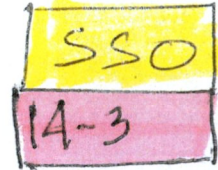
Attachments:

Photos Turner Lift station Prison Lift station



Forrest City Water Utility

303 NORTH ROSSER ST.
FORREST CITY, ARKANSAS 72335
870-633-2921



NON-COMPLIANCE REPORT

Facility Name: Forrest City Wastewater Treatment Plant

NPDES Permit: AR0020087

Inspection Date 4/20/16

VIOLATION Inadequate Operation and Maintenance - Mallory Pump Station


CORRECTIVE ACTION/PREVENTIATIVE MEASURES/OTHER NARRATIVE:

At time of inspection, Pump #1 was operational. Pump #2 was Out of Service due to bearing failure and was waiting for repair/replacement pump. Pump #3 was Out of Service due to unknown blockage and could not be clear until repairs on Pump #2 were completed. Pump # 2 parts arrived on 5/12/2016 and were installed 5/16/2016 but, could not be completed because the pump shims were not shipped with the parts. During this time we were able to clear the blockage from Pump #3. As of 5/18/2016 Mallory Station has 2 operational pumps. (Pumps #1 & #3). We will have pump #2 operational as soon as the shims arrive.

Calvin Murdock

POND
14-4

Inspection Report: Forrest City WWTP, AFIN: 62-00070, Permit #: AR0020087

 A R K A N S A S Department of Environmental Quality		WATER DIVISION INSPECTION REPORT			
		AFIN: 62-00070	PERMIT #: AR0020087	DATE: 4/20/2016	
COUNTY: 62 St. Francis		PDS #: 090729	MEDIA: WN		
GPS LAT: 34.997413 LONG: -90.835236 LOCATION: Entrance					
FACILITY INFORMATION		INSPECTION INFORMATION			
NAME: Forrest City WWTP LOCATION: Approximately 3 miles West of Forrest City, at the end of SFC 209 CITY: Forrest City, AR 72336		FACILITY TYPE: 1 - Municipal INSPECTOR ID#: 26075 S - State FACILITY EVALUATION RATING: 1 - Unsatisfactory INSPECTION TYPE: Compliance Evaluation DATE(S): 4/20/2016 ENTRY TIME: 09:00 EXIT TIME: 12:00 PERMIT EFFECTIVE DATE: 8/1/2012 PERMIT EXPIRATION DATE: 7/31/2017			
RESPONSIBLE OFFICIAL		INSPECTION PARTICIPANTS			
NAME / TITLE: W. H. Calvin Murdock, / Manager COMPANY: Forrest City WWTP MAILING ADDRESS: 303 North Rosser, P.O. Box 1074 CITY, STATE, ZIP: Forrest City, AR 72336 PHONE & EXT. / FAX: 870-261-1424 / EMAIL:		NAME/TITLE/PHONE/FAX/EMAIL/ETC.: Joel Thetford, Class III Operator, # 05326, 870-270-0201			
CONTACTED DURING INSPECTION: No					
AREA EVALUATIONS					
<small>(S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Applicable/Evaluated)</small>					
S	PERMIT	S	FLOW MEASUREMENT	N	STORMWATER
S	RECORDS/REPORTS	S	LABORATORY	U	FACILITY SITE REVIEW
U	OPERATION & MAINTENANCE	S	EFFLUENT/RECEIVING WATER	U	SELF-MONITORING PROGRAM
S	SAMPLING	S	SLUDGE HANDLING/DISPOSAL	N	PRETREATMENT
N	OTHER:				
SUMMARY OF FINDINGS					
At the time of inspection, the follow violation was noted: 1. Part III, SECTION B, Item 1A; Inadequate Operation and Maintenance. Specifically, there was a significant amount of erosion on the levees of the North EQ Basin. This is a REPEAT violation cited during the April 2014 inspection.					
GENERAL COMMENTS					
This violation was also noted in an inspection conducted on April 17, 2014 and August 20, 2014. It appears that no action has been taken to correct the issue.					
INSPECTOR'S SIGNATURE: <i>Steven L. Henderson</i>			Steven L. Henderson		DATE: 4/29/2016
SUPERVISOR'S SIGNATURE: <i>Kerri McCabe</i>			Kerri McCabe		DATE: 5/16/2016

SSO
POND
14-5
A2AYSB



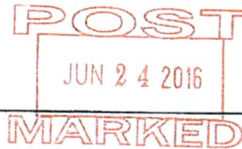
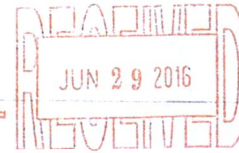
FORREST CITY WATER UTILITY

303 NORTH ROSSER ST.

FORREST CITY, ARKANSAS 72335

870-633-2921

JUNE 20, 2016



Mr. Steven L. Henderson

Arkansas Department of Environmental Quality

District 6 Field Inspector

Water Division

RE: Response to Summary of Findings; April 20, 2016 Compliance Inspection

AFIN: 62-00070

NPDES Permit No: AR0020087 , ARR000222

1. Improper operation and maintenance

- a) Erosion of levees- The Levee erosion of the North EQ Basin is currently being addressed as a part of our ongoing facilities maintenance program. It may appear that nothing is being done, however subsequent to our April 2014 inspection we have been discharging from the north basin on a daily basis in excess of 1MGD. In order for repairs to be completed, it is necessary to drain the pond. We deployed a plug in the equalization pipe the end of April this year. We anticipate having a dry pond by mid-August which will give us a (60) sixty day window to complete work on the worst sections of the north banks of the north pond this season. (see enclosed photos) These Basins are approximately 160 acres containing more than 1/4billion gals. The original design of the pond system did not contemplate isolating the two structures therefore there was no valve installed.

2. Inadequate Operation and Maintenance

- a) The Turner Pump Station: Please review the attached report.
- b) The Mallory Pump Station: Please review the attached report.
- c) The Prison Pump Station: Please review the attached report.
- d) The Prison Pump Station has major issue with the character of items deposited into the system. We are currently working with The Prison and our engineers to develop a solution to an increasing problem. (please see attached photos)

Please review our response to prior inspections as to the reason for the pond erosion issue.

The Utility now has an I/I implementation plan with the approved budget to formally engage our consultant.

Sincerely,

Forrest City Water Utility

W.H. Calvin Murdock, Utility Manager

(870)261-2849 -Whcm2@aol.com