

INTERIM REPORT
Alma, Arkansas Wastewater Treatment Facility
Corrective Action Plan

NPDES Permit No. AR0021466
AFIN 17-00059

May 2019

Prepared for:

City of Alma, Arkansas

Prepared by:

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Introduction

The Alma, Arkansas wastewater treatment facility located at 2500 Orrick Road southeast of the City of Alma is permitted under the NPDES permit system as Permit Number AR0021466, AFIN 17-00059. The system treats municipal wastewater from the City of Alma, Arkansas and from the Town of Dyer, Arkansas.

The treatment system consists of a bar screen and Parshall flume in the headworks. Lagoon one is 1 (one) completely mixed cell followed by two partially mixed cells. Lagoon two is 2 (two) facultative cells, used as partial-mix cells with supplemental aeration as needed. Lagoon three is a facultative lagoon. Lagoon 4 is used as a holding lagoon for equalization as needed.

The facility is permitted for the following parameters and limits:

Effluent Characteristics	Discharge Limitations		
	Mass, lb./day	Concentration, mg/L or as noted	
		Monthly Avg.	7-Day Avg.
Flow	N/A	Report, MGD	Report, MGD
Overflows	Monthly Total SSOs (occurrences/month)		
Overflow Volume	Monthly Total Volume of SSOs (gallons/month)		
Biochemical Oxygen Demand (BOD ₅)	437.9	30.0	45.0
Total Suspended Solids (TSS)	437.9	30.0	45.0
Dissolved Oxygen (D.O.)	N/A	2.0 (Inst. Min.)	
Fecal Coliform Bacteria (FCB)	Colonies/100 mL		
May - September	N/A	200	400
October - April	N/A	1000	2000
Total Residual Chlorine (TRC)	N/A	0.4 (Inst. Max.)	
Total Recoverable Arsenic	N/A	Report	Report
Total Phosphorus (TP)	N/A	Report	Report
Nitrate + Nitrite Nitrogen (NO ₃ + NO ₂ - N)	N/A	Report	Report
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.
Acute WET Testing			
Pimephales promelas (Acute) Pass/Fail Lethality (48-Hr NOEC) TEM6C Survival (48-Hr NOEC) Coeff. Of Variation Pass/Fail Retest 1 Pass/Fail Retest 2 Pass/Fail Retest 3		Report (Pass/Fail) Report % Report % Report Pass/Fail Report Pass/Fail Report Pass/Fail	

Daphnia pulex (Acute)) Pass/Fail Lethality (48-Hr NOEC) TEM3D Survival (48-Hr NOEC) Coeff. Of Variation Pass/Fail Retest 1 Pass/Fail Retest 2 Pass/Fail Retest 3		Report (Pass/Fail) Report % Report % Report Pass/Fail Report Pass/Fail Report Pass/Fail		
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The City entered a Consent Administrative Order in January 31, 2018 as a result of BOD₅ and TSS permit exceedances.

The Corrective Action Plan (CAP) for the City of Alma was developed in 2017. The corrective actions have been implemented within the schedule proposed and amended in March, 2018. This interim report is an update since the February 2019 report.

The treatment system continues to meet permit limits for BOD₅ and TSS since the first corrective actions were implemented by increasing aeration in 2017 and 2018.

Corrective Actions Implemented February Through May, 2019

1. Lagoon 2 west bank has been stabilized with rip rap as shown in Photo 1.
2. Hexprotect floating cover tiles are being delivered and deployed over Lagoon 2 and are contained using a temporary floating baffle as shown in Photo 2. A photo of an individual Hexprotect tile is shown in Photo 3.
3. Plans and specifications for baffle curtains and floating baffles have been approved by ADEQ and Arkansas Department of Health
4. The construction has been permitted by ADEQ
5. The baffle curtains and floating baffles have been advertised for bid
6. The aerators have been selected for refurbishing and installation into Lagoon 3 after the baffles are installed
7. Mooring blocks and bollards have been installed around Lagoon 3 for the baffles. Rip Rap has been installed near the bollards. These improvements are shown in Photos 4 and 5.

Effect of Corrective Actions

The treatment system has met permit limits following aeration equipment repairs and implementation, and without the addition of alum and Earthtec®. The Discharge Monitoring Reports (DMRs) indicate that the treatment facility has continued to meet the NPDES permit limits during the period from January through April, 2019.

Schedule

The project completion date is expected to be no later than December 31, 2019.



Photo 1
Rip Rap and Stabilized Levee
West Shore of Lagoon 3



Photo 2
Hexprotect Floating Cover Tiles
Contained Using a Temporary Floating Baffle

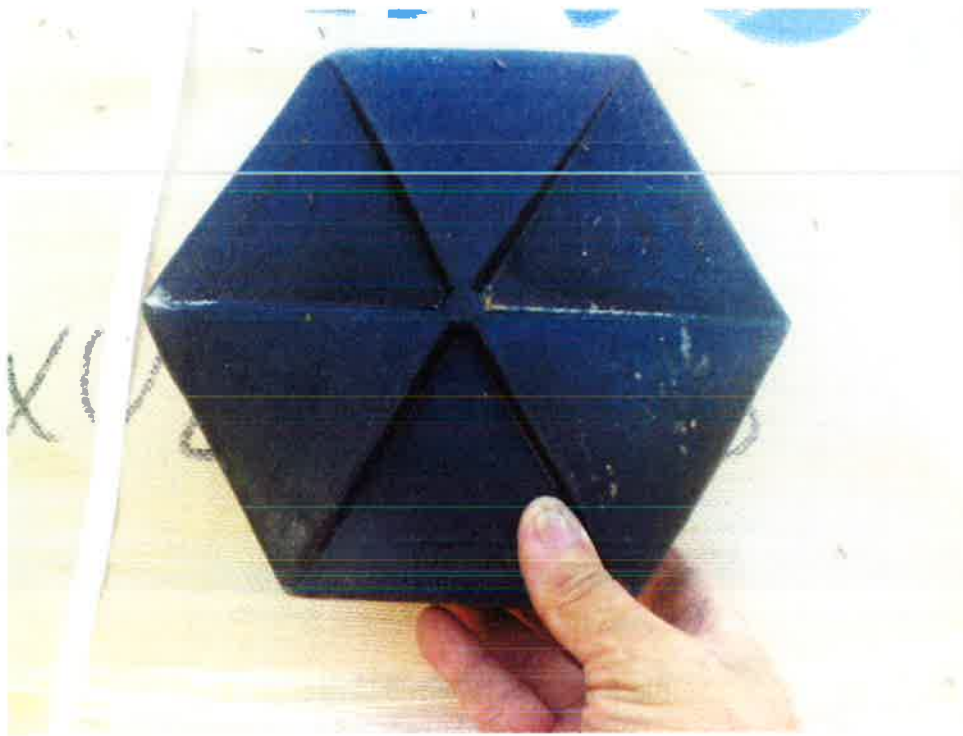


Photo 3
Individual Hexprotect Tile



Photo 4
Mooring Block and Loop for Baffle Curtain
West Shore of Lagoon 3



Photo 5
Bollard and Rip Rap for Baffle Curtain
East Shore of Lagoon 3

