INTERIM REPORT Alma, Arkansas Wastewater Treatment Facility Corrective Action Plan

> NPDES Permit No. AR0021466 AFIN 17-00059

> > August, 2018

Prepared for:

City of Alma, Arkansas

Prepared by: Morrison Shipley Engineers, Inc. 2407 SE Cottonwood Street Bentonville, AR 72712 479-273-2209 www.morrisonshipley.com

Introduction

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 May 2018 report.

Corrective Actions Implemented

The aeration equipment was repaired in early 2018 and all aeration is being used in lagoon 1. Lagoon 2 is partially-aerated.

With concurrence from ADEQ, alum and Earthtec® additions were discontinued in 2018.

Covers were fabricated to cover a portion of Lagoon 2 and were deployed over part of the lagoon.

Effect of Corrective Actions

The treatment system continues to meet permit limits following aeration equipment repairs and implementation, and without the addition of alum and Earthtec®. The May and June Discharge Monitoring Reports (DMRs) and the July laboratory results indicate that the treatment facility has continued to meet the NPDES permit limits through the summer.

Change of Material for Covering the Lagoons

The fabricated lagoon covers were damaged by high winds in June. Because of the wind damage and the need to meet the deadlines for the Corrective Action Plan and Consent Administrative Order (CAO), the decision has been made to abandon fabricating the covers made from recycled materials. A commercially available lagoon covering product will be used. At this time, no change in concept is anticipated. As previously proposed, the procedure will be to cover the facultative lagoon downstream of the aerated lagoon. The cover will prevent sunlight from penetrating the water column and deter algae growth.

The product being considered is Advanced Water Treatment Technologies (AWTT) Hexprotect[®] Aqua. The product is a UV-resistant, high-density polyethylene system consisting of multiple hexagonal floating "tiles." <u>http://www.awtti.com/hexprotect-aqua-hexagonal-cover/</u> Each tile covers approximately 0.4 square foot, so covering one acre of the lagoon will require approximately 113,670 tiles. The tiles are advertised as being wind resistant up to 130 mph winds.

No schedule change is anticipated at this time.

DMR Copy of Record

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Permit																		
Permit #:	AR0021465				Permittee:		ALMA, CÍ	TY OF						Facility:			ALMA, CITY OF	
Major:	Yes				Permittee Address:	:	811 FAYE	TTEVILLE A	/E STE	A				Facility Location:			2500 ORRICK RD	
and the second			· .		·		ALMA, AH	(72921						1			ALMA, AR 72921	
Permitted Feature:	001 External Outfall				Discharge:		001-A 001-MON	THLY-TRID	UNICI	PAL WW								
Report Dates & Status																		
Monitoring Period:	From 05/01/18 to 0)5/31/1B			DMR Due Date:		06/25/18							Status:			NetDMR Validated	
Considerations for Form Completion																		
Report flow as monthly average & daily II, 5, (SSO)17-00059	maximum in million	gallons j	perday.(S) ∷	Use Overflow	is (74062) to report to	al number of SS	Os/Month. Use	e Overflow vol	ume (74	(063) to repo	nt total vo	Hume of SSOs in	gailons	/month. Report "0".	(zero), if no	overfic	ws during the entire r	nonth. See Part
Principal Executive Officer		- 4 S			· . ·													
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Form NODI:	-																	
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00300 Oxygen, dissolved [DO]	1 - Effluent Gross	a		Permit Req. Volue NCIX					>*	2 MO AV XIN					19 - mgʻL	D	03/07 - Three Per Week I	GR - GRAB
				Sample	= > 50.6			26 - b-c			=	18.2	÷	22.3	19 - mgʻ.		03/07 - Three Per Week	CP - COMPOS
00310 BOD, 5-day, 20 deg. C	1 - Effluent Gross	D	-	Permit Rey	<= 437.9 MO AVG	5		26 b d			<-	30 MO AVG	<	45 7 DA AVG	19 mg/.	0	03:07 - Three Per Week 1	CP - COMPOS
				Sample					-	7.3			×	8.9	12 · SU		03/07 - Three Per Week	UR - GRAB
00400 pH	1 - Effluent Gross	0		Permit Reg.					**	6 MINIMUM			<=	9 MAXIMUM	12 - SU	D	03/07 - Three Per Weak	GRAB
				Value NODI	- 175 3			26 Jb/d				15.6		19	 19 - mo/l		03/07 - Three Per Week	CP - COMPOS
00530 Solids, total suspended	1 - Effluent Gross	0		Permit Reg.	<= 437.9 MO AVG	;		26 lb/d			<-	30 MO AVG	<=	45 7 DA AVG	79 - mg/L	0	03/07 - Three Per Week	CP COMPOS
				Value NODI	_							6.F						0 0040
20620 Million & Millions total fac Mil	1 - Effuent Gross	0	_	Sample Permit Part	= 507 Ren Mon MO 4	NG.		26 ib/d			-	- u.5 Reg Mon MO AVG	-	95 Reg Mon 7 DA AVG	19 - mg/L 19 - mg/L	0	01/30 - Monthly i	GR - GRAB
CREACHING + HIGHER FORE [23.14]	1 · Endert Ordan			Value NODI													· · · · · ,	
				Sample	= 25.35			26 - Ib/d			-	2.5	-	2.5 Dee Mars 3 D4 4940	19 - mg/c	•	01/30 - Monthly	GR GRAB
00665 Phosphorus, total [as P]	1 - Efflueni Grosa	0	-	Permit Req. Velue MOBI	Red Mon MU 4	wG		20 • 1920				Ked Mon MO VVG		Red Mon / DV MVG	19 × mg/c	0	to is 30 - NHOMERY	SH - GRAD
				Sample	= C.961	≞ 1 .	522	ea - MGD									01101 - Davly	NI- TOTA_Z
50050 Flow, in conduit or thru treatment plant	1 - Effluent Gross	Ũ		Pennit Req.	Reg Mon MO /	AVG R	eq Mon CAI⊾Y M	IX 03 - MGD								D	01101 - Daily	TVI TOTALZ
				Value NOUS Semole									-	5.04	19 - ing/L		03/07 - Three Per Weak	GR - GRAB
50060 Chlorine, lotal residual	1 - Effluent Gross	۵		Parnit Raq.									<=	." INST MAX	19 · mg/L	Ð	03/07 - Three Per Week	GR - GRAB
				Value NOD							_	22	_	60	12 #(100)		03/07 Three Part Mank	CRAB
74055 Coliform Jecal general	1 - Effluent Gross	0		Permit Reg:							<=	200 30DA GEO	<=	400 7 DA GEO	13 - #100ml	0	03/07 - Three Per Week	GR + GRAB
1 1000 Content Incon Manager				Value NODi														
	6 . Comments	0		Sample Describe	= 0 Reg Mag MO	EDTAL		93 - 000011m0								-	999 - See Comments 999 - See Comments	994 - See Comments 999 - See Comments
74052 Uverflows	5 - See Commerts	U		Value NODI	Reg Man MO	U AL		53 - 0000/100									and decidentially	and generalised
				Sample	= 0			57 ga≄									999 - See Convinents	399 See Comments
74963 Overflow volume [SS0 volume, CSO volur	ne] S · See Comments	0		Permit Req. Velus NOOI	Reg Mon MO	FOTAL		57 gal								U	999 - See Comments	199 - See Cominenti

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

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ALMA, CITY OF

DMR Copy of Record

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Permit																		
Permit #:	AR0021466	1.1.1			Permittee:		ALMA, CIT	TY OF						Facility:			ALMA, CITY OF	
Major:	Yes				Permittee Address:	÷ .	811 FAYET ALMA, AR	TTEVILLE / 72921	VE., ST	EA				Facility Location	ŧ.		2500 ORRICK RD ALMA, AR 72921	
Permitted Feature:	001 External Outfall				Discharge:		001-A 001-MONT	THLY-TRTD	MUNIĆ	PAL WW	· · · · ·							
Report Dates & Status					•													
Monitoring Period:	From 06/01/18 to	06/30/18	3		DMR Due Date:		07/25/18							Status:			NetDMR Validated	
Considerations for Form Completion			1	1997 - 1997 -	•	· · · · ·								•				
Report flow as monthly average & daily II. 5. (SSO). 17-00059	maximum in million	galloris	per day. (S	i) Use Overflow	s (74062) to report total nur	nber of SSOs/	Monih. Use	Overflow v	olume (7	4063) to repo	ort total v	olume of SSOs in	gallon	s/month. Report "0"	(zero), if n	overil	ows during the entire m	onth. See Parl
Principal Executive Officer					10 A													
First Name:					Title:									Telephone:				
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No Data Indicator (NODI)		2.5											22					
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				Sample	73.2			26 - Ib/d			-	139	=	19.3	19 - mg'u		03/07 - Three Per Week, C	P COMPOS
00310 BOD. 5-day. 20 deg. G	1 - Effluent Gross	G		Permit Req. • Value NODI	437.9 MO AVG			26 - Ib/d			<=	30 MO AVG	*	45 7 DA AVG	19 - mg/L	¢	03/07 - Three Per Week C	P · COMPOS
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00400 pH	1 - Effluent Gross	۵		Permit Req.					>=	6 MINIMUM			<=	9 MAXIMUM	12 - SL	0	03/07 - Three Per Week G	R - GRAB
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00530 Souds, total suspendeo	1 - Efflueni Gross	0	••	Permit Req.	- 437.9 MO AVG			26 ∙ t⊷c			K =	30 MO AVG	<	45.7 DA AVG	19 - mgr_	0	03'07 - Three Par Week, C	P COMPOS
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00630 Nitrite + Nitrate total [as N]	1 - Effluent Gross	0		Permii Req.	Reg Mon MO AVG			26 Ihid			-	Reg Mon MO AVG		Reg Mon 7 DA AVG	19 - mg/L	n	05/30 - Monthay G	R GRAB
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00665 Phosphorus, total (as P)	1 - Effluent Gross	0		Permit Reg.	Reg Mon MO AVG			26 - 10/d			-	3 Reg Mon MO AVG	-	a Reg Mon 7 DA AVG	19 - mg/c 19 - ing/c	G	01/30 - Monthly G 01/30 - Monthly G	R GRAB
				Value NODI														
50050 Flow, in conduit or thru treatment plant	1 - Effluent Gruss	0		Sample : Permit Reg.	Red Mon MO AVG	= 1,226 Reo k	Ion DAILY Ma	C3 - MGD C3 - MGD									-0101-Daty 11 -0201-034 11	M - TOTA_Z
				Value NODI												.,		N
50060 Chinone Hotal residual	1 - Effluent Genes	0		Sample Recent Reco									-	0.04	19 - mg/L		03/07 - Three Per Week G	R - GRAB
	Endoire Groas	v		Value NODI									<=	TINST MAX	19 - mg/l	0	0.907 - Three Per Week G	R - GRAB
74655 California facationanai				Sample							=	36	•	97	13 - #/100m		03/07 - Three Per Week G	R GRAB
74035 Coliforni, tecal general	T - Enluent Gross	0		Vermit Hell.							<	200 30DA GEO	<=	400 7 DA GEO	13 - #1100ml	Q.	03407 - Three Per Week G	R - GRAB
				Semple =	¢			93 - occur.me	5								999 - See Communis 99	99 - See Comments
74062 Overflows	S - See Comments	0		Permit Req. Value MODI	Red Mon MO TOTAL			93 - occurime)							G	999 - See Comments 99	99 - See Comments
				Sample	Ð			57 - gal									999 - See Commonts 99	99 - See Commanis
74063 Overflow volume (SS0 volume, CSO volum	e] S - See Comments	0		Parroll Reg.	Reg Mon MO TOTAL			57 - gal								n	999 - See Comments 99	99 - See Comments
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If a parameter row does not contain any	values for the Sam	ple nor E	Effluent Tra	ding, then none	of the following fields will h	e submitted fo	r that row U	Inits Numb	er of Ex	ursions Fre	ouency /	of Analysis and S	amole 1	fvne				
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Comments Affectments No attechments

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EFFLUENT LOADING REPORT

Month Vuly Year 20_18 MAG

DATE	BOD	BOD	TSS	TSS	BOD	TSS	Total	
	mg/L	7 day avg.	mg/L	7 day avg.	Pounds	Pounds	Flow	
1								
2	10		3		62.38	18.71	0.748	
3	10	9.67	8	7.33	65.30	52.24	0.783	
4								
5	9		11		56.07	68.53	0.747	
6								
7								
8								
9	11		24		57.52	125.50	0.627	
10	10	9.00	19	21.33	48.46	92.07	0.581	
11	6		21		26.97	94.40	0.539	
12								
13								
14								
15								
16	15		29		54.67	105.69	0.437	
17	13	14.00	13	20.00	47.49	47.49	0.438	
18	14		18		63.28	81.37	0.542	
19								
20								
21								
22								
23	11		26		35.96	85.00	0.392	
24	14	12.33	32	30.67	43.08	98.48	0.369	
25	12		34		35.63	100.95	0.356	
26								
27								
28								
29								
30	25		31		170.97	212.00	0.820	
31	21		35		137.31	228.85	0.784	
Max	25	14.00	35	30.67	170.97	228.85	0.820	
Min	6		3		26.97	18.71	0.356	
Avg.	12.93		21.71		64.65	100.81	0.583	