

# CORRECTIVE ACTION PLAN

APRIL 27<sup>TH</sup>, 2017

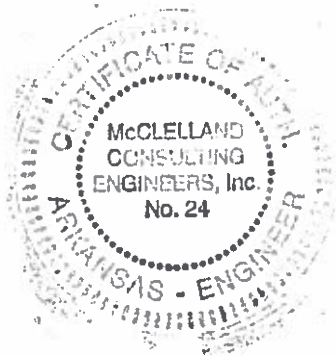
## WASTEWATER TREATMENT PLANT IMPROVEMENTS

### CAVE SPRINGS, ARKANSAS

*ISSUED FOR REVIEW*

#### PREPARED FOR:

THE CITY OF CAVE SPRINGS  
134 N. MAIN STREET  
CAVE SPRINGS, AR 72718



#### Prepared By:

Barret Knutson, E.I.  
McClelland Consulting Engineers, Inc.  
1810 N. College Avenue  
Fayetteville, AR 72703



**MCE** McCLELLAND  
CONSULTING  
ENGINEERS, INC.  
*DESIGNED TO SERVE*

**CORRECTIVE ACTION PLAN**  
**THE CITY OF CAVE SPRINGS**  
**WASTEWATER TREATMENT PLANT IMPROVEMENTS**

**Introduction**

This Corrective Action Plan (CAP) was prepared by MCE on behalf of the City of Cave Springs' Water and Wastewater Department. The CAP was prepared at the request of the Water Division Enforcement Branch of the Arkansas Department of Environmental Quality (ADEQ) in an incompleteness letter for renewal of No-Discharge Permit 4893-WR-3 in a letter dated March 24<sup>th</sup>, 2017.

**Purpose**

Over the past 5-years during the permitting cycle of Permit 4893-WR-2, the City of Cave Springs has recorded 22 instances of exceeding their permit limits, 20 of which were for exceedances of Total Suspended Solids (TSS) limits. The City of Cave Springs is committed to complying with environmental laws and regulations and therefore is determined to identify and address their wastewater treatment plant's performance. Exceedances of the permitted concentrations of TSS can be seen in the appendix, *Appendix I*, at the end of this report.

**Scope**

The goal of this analysis was to identify and resolve the issues leading to excess solids accumulation within the system without having to upgrade or retrofit the existing plant. It was assumed that the problems were due to a piece of equipment under performing or an overlooked part of the operation and maintenance protocol. This assumption was based on the fact that the plant has a relatively short operational life. Additionally, the plant was designed to treat much higher wastewater flows while keeping concentrations of permitted pollutants within acceptable ranges. If necessary the plant would undergo some form of upgrading by whatever means necessary, in order to get into compliance with their permit.

**History**

With construction finished late in the year of 2006, the City's new wastewater treatment facility was permitted to dispose of its effluent via sub-surface, drip irrigation, discharge. The plant is comprised of two package treatment facilities, which discharge effluent underground beneath the adjacent Creek's Golf Course. Disposal of effluent in this fashion serves a symbiotic benefit to

both the client and the City: the golf course benefits by obtaining irrigation, rich in nutrients, for their grass fairways and rough, and the City benefits by receiving additional removal of permitted pollutants by the grasses and soils, as well as an adjacent discharge for their effluent.

### **Location**

The Cave Springs WWTP is located off of Arkansas Highway 112 South of the City. The plant is only accessible by going through the Creeks Golf Course and is located on the far north side of the property.

### **Condition of Existing Facility**

As previously mentioned, the current treatment facility is relatively young, and therefore should have plenty of anticipated operational life remaining. Originally, during the first permitting cycle, only Plant 1 was utilized for treatment and Plant 2 was kept on standby. During the last permitting cycle, only Plant 2 was used for treatment while Plant 1 was kept on standby; this will remain the same for the next permitting under Permit 4893-WR-3. Flows over the past year indicated an Annual Average Flow (AAF) of 40,000 GPD with a peak flow of around 150,000 GPD, with a capacity of 320,000 GPD, it is anticipated that Plant 2 will have ample treatment capacity over the next 5-years, even at peak flow. Although ample capacity is available and the operational life of Plant 2 is relatively young, instances of MMR exceedances of TSS have persisted.

### **Environmental Resources**

The only environmental resource involved with this plan is the renewal of the City's existing ADEQ No-Discharge Permit.

### **Growth Area and Population**

According to the Northwest Arkansas Regional Planning Committee (NWARPC), from 1990 to 2010, the average annual population increase of Cave Springs was roughly 64 people per year. With continued growth of the Fairway Valley Residential Development, the population is expected to continue to grow at around the same rate over the next decade. Based on these population growth models, the City's current WWTP will have ample treatment capacity over the next permitting cycle.

## **System Operation & Maintenance**

Because there is no new proposed construction or expansion to the existing facility, no new staff is currently needed for plant operations. Maintenance operation will continue based upon manufacturer's recommendations.

## **Case Background**

The existing plant is adequately sized to handle the influent flowrates and loadings received from the sewer system. However, excess TSS accumulation has led to numerous discharge violations over the previous permitting cycle. It was realized by Plant staff that the cartridge filters used in the system were regularly clogging up. This was leading to sludge accumulation in the sub-surface irrigation dosing tanks.

After a thorough system investigation, it was determined that the filters were not at fault and were only clogging up due to excess solids carryover. The true cause of the WWTP's accumulation of excess TSS was due to the Waste Activated Sludge (WAS) system pumps. The operators were turning on the pumps everyday and assuming that they were operating correctly, but did not realize that the pumps had become worn and were no longer adequately pumping the sludge. Repairing and replacing the WAS pumps was a simple fix for the treatment plant and did not require any additional system redesign. By replacing the WAS pumps, solids inventories are maintained to provide adequate and efficient operation. By wasting sludge as designed, treatment will improve, and TSS will no longer carryover to the dosing tanks and into the sub-surface disposal fields.

## **Proposed Goals of the Plan**

The issues pertaining to exceedances of permitted TSS concentrations have been identified and corrected. It is predicted that after a period of equilibration, future instances of exceeding permitted TSS concentrations will be prevented. The plant operators and staff have been made aware of what created the problem and how to identify and prevent future instances of this from happening again.



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

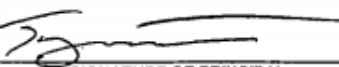
<b>PERMITTEE NAME</b> City of Cave Springs
<b>PERMITTEE ADDRESS</b> P.O. Box 36 Cave Springs AR 72718

<b>FACILITY NAME (IF DIFFERENT)</b> Plant #2
<b>FACILITY ADDRESS</b> 498 Pebble Beach Dr.

<b>PERMIT NO.</b> 4893-WR-2
<b>AFIN NO.</b> 04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

WASTEWATER EFFLUENT MONITORING PERIOD	
MM/DD/YYYY FROM 11/01/2016	MM/DD/YYYY TO 11/30/2016

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	7.4	MG/L	ONCE/ MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	_____	6.8	MG/L	ONCE/ MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.4	S.U.	ONCE/ MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	_____	15.0	MG/L	ONCE/ MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	_____	2400	N/100 ML	ONCE/ MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	22.40	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	17.1	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	46.293	MG/L	ONCE/ MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		65.0	MG/L	ONCE/ MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 1.85	DAILY MAX .07	MGD	ONCE/ MONTH TOTAL FLOW	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Tony Merworth water/sewer superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 		
TYPED OR PRINTED				TELEPHONE 479 295-3013	DATE 12/01/2016	
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)			AREA CODE NUMBER MM/DD/YYYY			

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

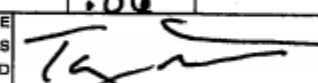
PERMITTEE NAME  
**City of Cave Springs**  
 PERMITTEE ADDRESS  
**P.O. Box 36  
 Cave Springs AR 72718**

FACILITY NAME (IF DIFFERENT)  
**Plant #2**  
 FACILITY ADDRESS  
**498 Pebble Beach**

PERMIT NO.  
**4893-WR-2**  
 AFIN NO.  
**04-01642**

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

WASTEWATER EFFLUENT MONITORING PERIOD  
 FROM **08/01/2016** TO **08/31/2016**

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	8.7	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	5.4	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.4	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	16.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	3400	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	22.40	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	17.5	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	40.67	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		59.6	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 1.61	DAILY MAX 0.06	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		DATE
Tony Merworth Water/Sewer Superintendent				 479 295-3013		09/01/2016
TYPED OR PRINTED				AREA CODE	NUMBER	MM/DD/YYYY
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) Maintenance on clarifier and D box should resolve TSS issues.						

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs AR 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #2
<b>FACILITY ADDRESS</b>
498 Pebble Beach

<b>PERMIT NO.</b>
4893-WR-2
<b>AFIN NO.</b>
04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 07/01/2016	TO 07/31/2016

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	8.5	MG/L	ONCE/ MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	_____	11.6	MG/L	ONCE/ MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.5	S.U.	ONCE/ MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	_____	36.0	MG/L	ONCE/ MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	_____	340	N/100 ML	ONCE/ MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	22.40	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	16.7	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	42.6	MG/L	ONCE/ MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		61.0	MG/L	ONCE/ MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 1.80	DAILY MAX 205	MGD	ONCE/ MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.				TELEPHONE	DATE
TYPED OR PRINTED					479 295-3013	08/01/2016
		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER	MM/DD/YYYY
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) After switched clarifiers prior to lab pulling sample. we are cleaning clarifiers and splitter boxes. should take care of TSS issues.						



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, AR, 72718


<b>FACILITY NAME (IF DIFFERENT)</b>
Plant 2
<b>FACILITY ADDRESS</b>
498 Pebble Beach

<b>PERMIT NO.</b>
4893-WR-2
<b>AFIN NO.</b>
04-01648

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 02/01/2016	TO 02/29/2016

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	7.9	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	_____	8.2	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.3	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	_____	15.5	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	_____	6000	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	52.60	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	20.0	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	35.152	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		30.5	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL	DAILY MAX	MGD	ONCE/MONTH	TOTAL FLOW
		1.3	.045			

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Tony Merworth Water/Sewer Superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 	TELEPHONE		DATE
			479 295-3320	02/29/2016	
TYPED OR PRINTED			AREA CODE	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)  
 We cleaned the wier in our clarifier which stirred a lot of the solids. we did this the day before the lab pulled the sample. we will investigate and make sure that is the problem.

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, AR, 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant # 2
<b>FACILITY ADDRESS</b>
498 Pebble Beach

<b>PERMIT NO.</b>
4893-WR-2
<b>AFIN NO.</b>
04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
FROM	TO
12/01/2015	12/31/2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	4.9	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	_____	5.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.5	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	_____	16.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	_____	2500	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	13.40	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	3.2	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	32.79	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		39.1	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 2.27	DAILY MAX .42	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE		DATE
TYPED OR PRINTED				479 295-3013		01/04/2016
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)			Violation for exceeding TSS limit, we have increased the sludge pumping time to help reduce TSS. we have Taken on a lot of I/I during our last rain event on 12/26 - 12/28. Typically we Treat 40,000 gal/perday, we treated 418,500 perday during this rain event, exceeding this plant's Design Capacity. No overflows just exceeded capacity.			

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
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<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, AR, 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant # 2
<b>FACILITY ADDRESS</b>
498 Pebble Beach

<b>PERMIT NO.</b>
4893-WR-2
<b>AFIN NO.</b>
04-01642

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<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 10-01-2015	TO 10-31-2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	7.0	MG/L	ONCE/ MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	_____	5.0	MG/L	ONCE/ MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.5	S.U.	ONCE/ MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	_____	16.0	MG/L	ONCE/ MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	_____	4	N/100 ML	ONCE/ MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	20.20	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE	*****	13.8	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	45.02	MG/L	ONCE/ MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		60.7	MG/L	ONCE/ MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL align="center">1.89	DAILY MAX align="center">.045	MGD	ONCE/ MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE	DATE	
TYPED OR PRINTED				AREA CODE	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) we are exceeding the limits on TSS, we are adjusting aeration and fixing sludge pump.



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b> City of Cave Springs
<b>PERMITTEE ADDRESS</b> P.O. Box 36 Cave Springs, AR, 72718

<b>FACILITY NAME (IF DIFFERENT)</b> Plant #1
<b>FACILITY ADDRESS</b> 1499 1/2 S. Main St

<b>PERMIT NO.</b> 4893-WR-2
<b>AFIN NO.</b> 04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
FROM <b>MM/DD/YYYY</b> 07/01/2015	TO <b>MM/DD/YYYY</b> 07/31/2015

TREATED WASTEWATER EFFLUENT SAMPLING							
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE		
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	14.9	MG/L	ONCE/MONTH	GRAB		
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	27.0	MG/L	ONCE/MONTH	GRAB		
PH EFFLUENT GROSS VALUE	6 to 9	7.0	S.U.	ONCE/MONTH	GRAB		
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	28.0	MG/L	ONCE/MONTH	GRAB		
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	70.0	N/100 ML	ONCE/MONTH	GRAB		
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	42.60	MG/L	ONCE/MONTH	GRAB		
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	41.6	MG/L	ONCE/MONTH	GRAB		
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	.469	MG/L	ONCE/MONTH	GRAB		
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		42.4	MG/L	ONCE/MONTH	GRAB		
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL align="center">.175	DAILY MAX align="center">.017	MGD	ONCE/MONTH	TOTAL FLOW	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Tony Merworth Water/Sewer Superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 		TELEPHONE 479 295-3013	DATE 08/06/2015
TYPED OR PRINTED				AREA CODE 479	NUMBER 295-3013	MM/DD/YYYY	
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) Fixed and until we get enough flow to this plant, as of now we are sending all waste water to plant #2. Monthly total will not be accurate due to mag meter malfunctioning.							

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>	City of Cave Springs
<b>PERMITTEE ADDRESS</b>	P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>	Plant #1
<b>FACILITY ADDRESS</b>	1499 1/2 S. Main

<b>PERMIT NO.</b>	4873-WP-2
<b>AFIN NO.</b>	04-D1642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 06-01-2015	TO 06-30-2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	5.0	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	6.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	7.2	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	20.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	1500	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	26.90	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE	*****	25.6	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	12.3	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		38.3	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 1.2	DAILY MAX 0.2	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE 479-721-7539 DATE 07-02-2015 AREA CODE NUMBER MM/DD/YYYY		
TYPED OR PRINTED	Rick Sayre Water-Sewer Superintendent			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT Rick A. Sayre		
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) Our TSS is still a little high, we have reset the sludge timers on plant 1 and pump out some sludge from Rose Tank to Sludge Tank. We also had mag meter go down for the first 5 days of the month. We also had tanks over flow on 6-18-2015 from rain and pumps quit working. On the 18 of June, we also started using Sewer plant #2, Sewer overflow Confirmation Number 918C2F3A						



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>	CITY OF Cave Springs
<b>PERMITTEE ADDRESS</b>	P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>	Plant #1
<b>FACILITY ADDRESS</b>	1499 1/2 S. Main

<b>PERMIT NO.</b>	4873-WP-L
<b>AFIN NO.</b>	04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY FROM 05-01-2015	MM/DD/YYYY TO 05-31-2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) GROSS VALUE	*****	6.7	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	-----	19.6	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	7.0	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	-----	28.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	-----	2200	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	34.70	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	29.5	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	23.53	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		54.6	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL	DAILY MAX	MGD	ONCE/MONTH	TOTAL FLOW
		1.10	0.07			

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Rick Sayre Water-Sewer Superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT Rick A. Sayre	TELEPHONE	DATE
			479-721-7539	06-01-2015
TYPED OR PRINTED			AREA CODE	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)  
 Our sewer plant must have gotten hit by lightning around the 27 of May. We lost one sludge pump, magmeter, and one master pump. Not sure if this is the problem to our High TSS. Hope it was the problem for our BOD. Are working on getting everything fixed. Had Ken Gregory out to go over plant. Still got ponding on drip field. With all the rain this might be some of the problem to the ponding.

ADEQ Form

Revised December 13, 2005

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, AR 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4873-WP-2
<b>AFIN NO.</b>
04-DIG-1

**RECEIVED**  
MAY 13 2015

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 04-01-2015	TO 04-30-2015

TREATED WASTEWATER EFFLUENT SAMPLING							
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE		
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	-----	6.2	MG/L	ONCE/MONTH	GRAB		
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	-----	14.0	MG/L	ONCE/MONTH	GRAB		
PH EFFLUENT GROSS VALUE	6 to 9	7.4	S.U.	ONCE/MONTH	GRAB		
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	-----	17.0	MG/L	ONCE/MONTH	GRAB		
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	-----	5800	N/100 ML	ONCE/MONTH	GRAB		
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	-----	31.40	MG/L	ONCE/MONTH	GRAB		
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	-----	29.9	MG/L	ONCE/MONTH	GRAB		
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	-----	13.83	MG/L	ONCE/MONTH	GRAB		
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		44.2	MG/L	ONCE/MONTH	GRAB		
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	-----	MONTHLY TOTAL 0.88	DAILY MAX 0.035	MGD	ONCE/MONTH	TOTAL FLOW	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE		
Rick Sayre Water-Sewer Superintendent		Rick A Sayre			479-721-7539		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			DATE		
					05-05-2015		
					MM/DD/YYYY		

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)

Not sure why TSS is high again, just had slug tanks pumped out. We are also having some ponding on drip field. Have failed and meet with Sam Dunn & McClelland Consulting Engineers to fix the problem.

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, Ar 72718

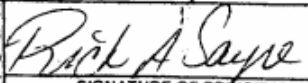
<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4873-WP-2
<b>AFIN NO.</b>
04-D1642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 02-01-2015	TO 02-28-2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	5.6	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	7.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	7.2	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	15.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	844	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	28.80	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	27.7	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	22.0	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		50.0	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.76	DAILY MAX 0.028	MGD	ONCE/MONTH	TOTAL FLOW

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Rick Sayre Water-Sewer Superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.	 <b>SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT</b>	TELEPHONE	DATE
			479-721-7539	03-05-2015
TYPED OR PRINTED			AREA CODE	NUMBER
				MM/DD/YYYY

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>	CITY OF Cave Springs
<b>PERMITTEE ADDRESS</b>	P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>	Plant #1
<b>FACILITY ADDRESS</b>	1499 1/2 S. Main

<b>PERMIT NO.</b>	4873-WP-L
<b>AFIN NO.</b>	04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
FROM MM/DD/YYYY	TO MM/DD/YYYY
01-01-2015	01-31-2015

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER		PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PHOSPHOROUS, TOTAL (AS P) GROSS VALUE	EFFLUENT	*****	5.9	MG/L	ONCE/MONTH	GRAB
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE		—	5.0	MG/L	ONCE/MONTH	GRAB
PH EFFLUENT GROSS VALUE		6 to 9	7.2	S.U.	ONCE/MONTH	GRAB
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE		—	18.0	MG/L	ONCE/MONTH	GRAB
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE		—	4100	N/100 ML	ONCE/MONTH	GRAB
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE		*****	24.60	MG/L	ONCE/MONTH	GRAB
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE		*****	23.6	MG/L	ONCE/MONTH	GRAB
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE		*****	16.7	MG/L	ONCE/MONTH	GRAB
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE			40.6	MG/L	ONCE/MONTH	GRAB
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE		*****	MONTHLY TOTAL 0.86	DAILY MAX 0.031	MGD	ONCE/MONTH TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE	DATE
Rick Sayre Water-Sewer Superintendent					SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT Rick A Sayre	479-721-7539
TYPED OR PRINTED					AREA CODE	NUMBER
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) Once again our TSS is High, we had both sludge tanks pumped out on 1-13-2015. I hope this takes care of this problem.						

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4893-WP-2
<b>AFIN NO.</b>
04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 12-01-2014	TO 12-31-2014

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	6.3	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	13.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	7.1	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	21.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	6800	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	16.80	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	12.0	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	26.80	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		40.2	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.86	DAILY MAX 0.033	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.				TELEPHONE	DATE
TYPED OR PRINTED					SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE
Rick Sayre Water-Sewer Superintendent		Rick A Sayre		479-721-7539	01-02-2015	
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) TSS went BACK UP Not sure why, we pumped close tank BACK to the front of plant to see how much sludge was in bottom of tank. I think our next step is to have sludge tanks pumped out and have sludge hauled off.						

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4873-WP-L
<b>AFIN NO.</b>
04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 10-01-2014	TO 10-31-2014

**RECEIVED**  
 SKR @ 10am  
 NOV 10 2014

TREATED WASTEWATER EFFLUENT SAMPLING					
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	6.7	MG/L	ONCE/MONTH	GRAB
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	-----	6.0	MG/L	ONCE/MONTH	GRAB
PH EFFLUENT GROSS VALUE	6 to 9	6.1	S.U.	ONCE/MONTH	GRAB
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	-----	26.0	MG/L	ONCE/MONTH	GRAB
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	-----	800	N/100 ML	ONCE/MONTH	GRAB
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	11.20	MG/L	ONCE/MONTH	GRAB
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE	*****	8.6	MG/L	ONCE/MONTH	GRAB
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	38.568	MG/L	ONCE/MONTH	GRAB
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		47.9	MG/L	ONCE/MONTH	GRAB
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.90	DAILY MAX 0.056	MGD	ONCE/MONTH  TOTAL FLOW

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
TYPED OR PRINTED			479-721-7539	11-03-2014

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)  
 TSS High - When they installed plant they ran flush return line into dose tank. We are going to remove flush line from dose tank to the slug tank. Then have dose tank pumped out.



Alimel

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4873-WP-2
<b>AFIN NO.</b>
04-01642

ADOE  
OCT 02 2014

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
FROM MM/DD/YYYY	TO MM/DD/YYYY

**RECEIVED**  
 OK. Exam  
 OCT 08 2014

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	EFFLUENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PHOSPHOROUS, TOTAL (AS P) GROSS VALUE		*****	6.4	MG/L	ONCE/MONTH	GRAB
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE		-----	3.0	MG/L	ONCE/MONTH	GRAB
PH EFFLUENT GROSS VALUE		6 to 9	6.4	S.U.	ONCE/MONTH	GRAB
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE		-----	23.5	MG/L	ONCE/MONTH	GRAB
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE		-----	154	N/100 ML	ONCE/MONTH	GRAB
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE		*****	15.70	MG/L	ONCE/MONTH	GRAB
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE		*****	10.7	MG/L	ONCE/MONTH	GRAB
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE		*****	34.381	MG/L	ONCE/MONTH	GRAB
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE			46.6	MG/L	ONCE/MONTH	GRAB
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE		*****	MONTHLY TOTAL 0.75	DAILY MAX 0.031	MGD	ONCE/MONTH  TOTAL FLOW

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Rick A Sayre</i>	TELEPHONE	DATE
TYPED OR PRINTED			479-721-7539	10-01-2014
			AREA CODE	NUMBER

COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)

COLS like our TSS is still high, have been in contact with company that installed system, have tried every thing they requested to do and it is still high, we are now going to have the slug tanks cleaned out

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b> City of Cave Springs
<b>PERMITTEE ADDRESS</b> P.O. Box 36 Cave Springs, AR 72718

<b>FACILITY NAME (IF DIFFERENT)</b> Plant #1
<b>FACILITY ADDRESS</b> 1499 1/2 S. Main

<b>PERMIT NO.</b> 4873-WP-2
<b>AFIN NO.</b> 04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY FROM 08-01-2014	MM/DD/YYYY TO 08-31-2014

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	6.7	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	9.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.0	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	18.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	100	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	15.70	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> N) EFFLUENT GROSS VALUE	*****	9.5	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	45.386	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		56.7	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.65	DAILY MAX 0.025	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Rick Sayre Water-Sewer Superintendent	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE 479-721-7539		DATE 08-04-2014
TYPED OR PRINTED				SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <i>Rick A Sayre</i>		AREA CODE
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) TSS still a little high, after cleaning filters, had per to low, have adjusted the air flow.						



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>	CITY of Cave Springs
<b>PERMITTEE ADDRESS</b>	P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>	Plant #1
<b>FACILITY ADDRESS</b>	1499 1/2 S. Main

<b>PERMIT NO.</b>	4873-WP-L
<b>AFIN NO.</b>	04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
FROM MM/DD/YYYY 07-01-2014	TO MM/DD/YYYY 07-31-2014

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	7.6	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	10.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.4	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	32.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	164	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	14.60	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	11.2	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	33.635	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		45.8	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.632	DAILY MAX 0.024	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE		DATE
TYPED OR PRINTED				479-721-7539		08-01-2014
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER
TSS-Limits are high this month, we found that the sludge pumps had been tripped or turned off.			Rick A Sayre			

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

<b>PERMITTEE NAME</b>
City of Cave Springs
<b>PERMITTEE ADDRESS</b>
P.O. Box 36 Cave Springs, Ar 72718

<b>FACILITY NAME (IF DIFFERENT)</b>
Plant #1
<b>FACILITY ADDRESS</b>
1499 1/2 S. Main

<b>PERMIT NO.</b>
4873-WP-2
<b>WAFIN NO.</b>
04-D1642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

<b>WASTEWATER EFFLUENT MONITORING PERIOD</b>	
MM/DD/YYYY	MM/DD/YYYY
FROM 3-01-2014	TO 3-31-2014

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) GROSS VALUE	*****	5.2	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	11.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	7.3	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	22.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	8100	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	30.20	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	0.3	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	22.19	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		31.5	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.164	DAILY MAX 0.033	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE		DATE
TYPED OR PRINTED				479-721-7539		04-01-2014
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here)			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		AREA CODE	NUMBER
Total Suspended Solids, are a little high this month. We had just cleaned the Filters at the sewer plants. This might be the cause of the high readings.			Rick A Sayre			

**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

PERMITTEE NAME	City of Cave Springs
PERMITTEE ADDRESS	P.O. Box 36 Cave Springs AR 72718

FACILITY NAME (IF DIFFERENT)	Plant #1
FACILITY ADDRESS	1499 1/2 S. Main

PERMIT NO.	4893-W2-2
AFIN NO.	04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

WASTEWATER EFFLUENT MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
FROM 08-01-2013	TO 08-31-2013

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	4.7	MG/L	ONCE/ MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	-----	2.0	MG/L	ONCE/ MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	6.7	S.U.	ONCE/ MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	-----	22.0	MG/L	ONCE/ MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	-----	210	N/100 ML	ONCE/ MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	10.10	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	5.7	MG/L	ONCE/ MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	22.917	MG/L	ONCE/ MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		29.9	MG/L	ONCE/ MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.67	DAILY MAX 0.065	MGD	ONCE/ MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			TELEPHONE		DATE
Rick A. Sayre Waterpower Superintendent	Rick A. Sayre			479 721-7539		09-04-2013
TYPED OR PRINTED	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			AREA CODE	NUMBER	MM/DD/YYYY
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) Looks like Total Suspended Solids exceeds permit limits. This might be because on 08-08-2013 our sewer plant got hit by lightning and caused a power outage, it also caused the sewer plant to over flow at one of the tank.						



**ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**MONTHLY MONITORING REPORT FOR DECENTRALIZED WASTEWATER TREATMENT FACILITIES VIA DRIP IRRIGATION**

PERMITTEE NAME  
City of Cave Springs  
 PERMITTEE ADDRESS  
P.O. BOX 36  
Cave Springs, Ar 72718

FACILITY NAME (IF DIFFERENT)  
plant #1  
 FACILITY ADDRESS  
1499 1/2 S. Main

PERMIT NO. TSS  
4893-WP-2  
 AFIN NO. WQ  
04-01642

MAKE ADDITIONAL COPIES OF THIS FORM FOR FUTURE USE. SUBMIT LAB ANALYSES WITH THIS FORM.

WASTEWATER EFFLUENT MONITORING PERIOD  
 FROM MM/DD/YYYY TO MM/DD/YYYY

TREATED WASTEWATER EFFLUENT SAMPLING						
PARAMETER	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
PHOSPHOROUS, TOTAL (AS P) EFFLUENT GROSS VALUE	*****	3.6	MG/L	ONCE/MONTH	GRAB	
CBOD, 5-DAY (20 DEG. C) EFFLUENT GROSS VALUE	—	2.0	MG/L	ONCE/MONTH	GRAB	
PH EFFLUENT GROSS VALUE	6 to 9	9.9	S.U.	ONCE/MONTH	GRAB	
SOLIDS, TOTAL SUSPENDED EFFLUENT GROSS VALUE	—	18.0	MG/L	ONCE/MONTH	GRAB	
COLIFORM, FECAL GENERAL EFFLUENT GROSS VALUE	—	26	N/100 ML	ONCE/MONTH	GRAB	
NITROGEN, TOTAL KJELDAHL (AS TKN) EFFLUENT GROSS VALUE	*****	11.20	MG/L	ONCE/MONTH	GRAB	
NITROGEN, AMMONIA TOTAL (AS NH <sub>3</sub> -N) EFFLUENT GROSS VALUE	*****	7.4	MG/L	ONCE/MONTH	GRAB	
NITROGEN, NITRATE + NITRITE (AS NO <sub>3</sub> -N + NO <sub>2</sub> -N) EFFLUENT GROSS VALUE	*****	37.79	MG/L	ONCE/MONTH	GRAB	
PLANT AVAILABLE NITROGEN (AS PAN) CALCULATED VALUE		46.3	MG/L	ONCE/MONTH	GRAB	
FLOW, THRU CONDUIT OR TREATMENT UNIT EFFLUENT GROSS VALUE	*****	MONTHLY TOTAL 0.33	DAILY MAX 10.016	MGD	ONCE/MONTH	TOTAL FLOW
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER <u>Rick A Sayre</u> <u>Water Superintendent</u>	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.			SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT <u>Rick A Sayre</u>		TELEPHONE 479 721-7589
TYPED OR PRINTED				AREA CODE	NUMBER	DATE 09-05-2012
COMMENTS AND EXPLANATION OF VIOLATIONS (Reference all attachments here) We are still working on how much soda ash to add to get pH where we need it. Should be better next month. we just cleaned filters at the plant, this might be why TSS was high this month.						

As agreed upon by McClelland Consulting Engineers (MCE) and Jamal Solaimanian of the ADEQ, Treatment Plant #1 will not be utilized during this permitting cycle. When Treatment Plant 1 is needed for further treatment purposes, The City of Cave Springs and MCE will consult with the ADEQ on requirements needed to implement the plant into future permits.

The City of Cave Springs, Arkansas has a municipal wastewater treatment plant which disposes its effluent via a subsurface discharge drip irrigation system located on an adjacent, privately owned golf course, The Creeks. There are five effluent disposal fields on the Creeks golf course which are intended to discharge effluent from the city of Cave Springs' two separate package wastewater treatment facilities into an underground drip system located on the Creek's Golf Course. Final construction of the plants was completed in 2006, connecting two dripfields to Treatment Plant 1 (TP1) and three dripfields to Treatment Plant 2 (TP2).

Originally only TP1, with a capacity of 92,000 gallons per day (GPD), was used for the city's sewage treatment needs and this was sufficient capacity to handle the city's waste treatment needs. However, since that time, TP1 has been taken out of service and TP2 serves as the only treatment facility for the city. TP2 has a much larger capacity of 320,000 GPD and is fully capable of handling waste flows, even at times of peak flow. With the current population growth projections, it has been determined that TP2 will be sufficient for the handling of the city's wastewater flows for the next permitting cycle, 4893-WR-3. TP1 will be kept on standby for future treatment needs and permitting cycles.

In accordance with the existing no discharge permit, 4893-WR-2, waste must be applied at a rate that provides a quantity of PAN that is equal or less than the nitrogen uptake rate of the cover crop. Cover crops on the golf course consist of the following three grasses, Bermuda, Fescue, and Rye. Waste is applied at a rate that complies with the guidelines set by the ADEQ based on the uptake of each cover crop. Bermuda grass was used as the cover crop for the course's fairway's and rough and therefore encompasses the vast majority of the dripfields. Rye and Fescue grasses are naturally occurring grasses which can be found in 'out of bounds' areas not developed by the golf course.

A monitoring well which lies in an intermediate elevation point on the course, within zone 8, can be used to assess the depth to groundwater level. In the previous permit 4893-WR-2, it is required that the depth to groundwater be at least 5-feet, in order to allow for proper treatment of Fecal Coliform. The most recent depth to groundwater measurement was taken in early May of 2017, where the depth to ground water was measured at 66-inches from the level of the soil. It should be noted that this measurement was taken only days after a significant flooding event when water table levels were high, and the depth to groundwater was still several inches clear of the permitted depth.



C:\Users\coven\Documents\Drawing3.dwg 5/15/17 at 4:26pm



ORIGINAL SIGNATURE ON FILE

CAVE SPRINGS WWTP  
CAVE SPRINGS, ARKANSAS

**811**  
Know what's below.  
Call before you dig.

NO.	DATE	REVISIONS	DESCRIPTION

DRIP FIELD  
LAYOUT FOR  
TREATMENT  
PLANT #2

PROJECT ENGR: EWC	DRAWN BY: BRK
DATE: MAY 2017	JOB NUMBER: FY17XXX
SCALE: N.T.S.	













**From:** [Barret Knutson](#)  
**To:** [McWilliams, Katherine](#)  
**Cc:** [Water Permit Application](#)  
**Subject:** RE: Permit 4893-WR-3; Response to Insufficiencies  
**Date:** Monday, May 15, 2017 6:56:51 PM  
**Attachments:** [image002.png](#)  
[image004.png](#)  
[Full Plan Signed.pdf](#)  
[WMP Response to Insufficient Comments.pdf](#)

---

Dear Katherine,

Attached to This email are two PDF documents which address the Deficiencies as outlined in the incompleteness letter dated March 24<sup>th</sup>, 2017:

- 1) Corrective Action Plan – Addressing MMR violations associated with Total Suspended Solids.
- 2) Response to Comments Made on the Waste Management Plan
  - a. The majority of the information requested had to do with operation of Plant 1. As discussed in our meeting last month, we have no intentions to implement Plant 1 during this permitting cycle but it will be kept on standby until further notice.
  - b. As MCE did not do the design of this plant, the original WMP and the subsequent calculations were kept with the CEI cover page and project number.

Please contact me at your earliest possible convenience if you have any questions or concerns.

**Barret Knutson, EI**  
**Project Engineer**



1810 N. College Ave. | Fayetteville, AR 72703

P.O. Box 1229 | Fayetteville, AR 72202

479.443.2377 office | 479.443.9241 fax

[bknutson@mce.us.com](mailto:bknutson@mce.us.com)

[www.mce.us.com](http://www.mce.us.com)



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