

May 29, 2008

Trevor Bowman, Public Works Director City of Siloam Springs P.O. Box 80 Siloam Springs, AR 72761

RE: Routine Compliance Evaluation Inspection

AFIN: 04-00106 NPDES Permit No.: AR0020273

Dear Mr. Bowman:

On May 28, 2008, I performed a routine compliance evaluation inspection of the waste water treatment facility in accordance with the provisions of the Federal Clean Water Act, the Arkansas Water and Air Pollution Control Act, and the regulations promulgated there under. This inspection revealed the following violations:

Flow meter accuracy check improperly calculated. Rather than using the recorded and calculated flow rates in the percent error formula, recorded and measured head were used to attempt to measure flow meter accuracy. This is in violation of Part II.C.2 of your permit. For a 5 foot rectangular weir without end contractions, $GPM = 7473 \ H^{1.5}$, where H = head in feet (note that the conversion formula varies depending on the units chosen for measurement). As such, recorded and calculated flow must be used in the percent error formula to ensure that the device is capable of measuring flows with a maximum deviation of less than $\pm 10\%$ from true discharge rates.

The above item requires your immediate attention. Please submit a written response to these findings to the Water Division Enforcement Section of this Department at the following address:

Water Division Enforcement Section Arkansas Department of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118-5317 Trevor Bowman, City of Siloam Springs May 29, 2008 Page 2

This response should contain detailed documentation describing the course of action taken to correct the item noted. This corrective action should be completed as soon as possible, and the written response is due by June 19, 2008.

For additional information you may contact the enforcement section by telephone at 501-682-0639 or by fax at 501-682-0910.

If I can be of any assistance, please contact me at 479-267-0811 ext 12 (west@adeq.state.ar.us).

Sincerely,

Alison West

District 1 Field Inspector

you alisan West

Water Division

cc: Water Division Enforcement Branch

Water Division Permits Branch

											T	
②	EPA										Form Approved OMB No. 2040-0003	
		UNIT	ED STAT	ES ENVIRONM			N AGENCY	ľ				
	NPDES Compliance Inspection Report											
Section A: National Data System Coding												
	Transaction Code			NPDES	Section A	1: Natio	nai Data	Э	Yr/Mo/Day		T. I. (F. T.	
1 N 2 5 3 A R 0 0 2 0 2 7 3 11 12 0 8 0 5 2 8 17 18 C 19 S 2								pec. Type Inspector Fac. Type 19 S 20 1				
	A F I N 0 4 - 0 0 1 0 6 Remarks											
	Inspection Work Days]	Facility !	Evaluation F	Rating		BI	(QA		Reserved	
	67 69		70	4		71	N 7	2	N 73 74 75	<u> </u>	80	
					S	Section 1	B: Facili	ty]	Data			
	ne and Location of Facility Inspected ude POTW name and NPDES permit			ial users disc	charging i	to POTV	V, also		Entry Time/Date 0850/5-28-2008		Permit Effective Date	
City	y of Siloam Springs Pollution Cont								0000/0 20 2000		October 1, 2007	
	Anderson Ave am Springs, AR 72761								Exit Time/Date 1405/5-28-08		Permit Expiration Date	
									1100/0 20 00		September 30, 2012	
	ne(s) of On-Site Representative(s)/T n Myers/Wastewater Superintend										ner Facility Data htfall 001	
											6.19396 094.56398	
	ne, Address of Responsible Official/ vor Bowman/Public Works Direct								Contacted	***	094.30390	
	y of Siloam Springs D. Box 80											
	oam Springs, AR 72761								Yes No V			
									nring Inspection			
C		1.4				larginal,	~		sfactory, N = Not Evaluated)	C		
S	Permit	M	1	Measureme			- C	•	erations & Maintenance	S	Sampling	
S	Records/Reports	S N	1	Monitoring l	_		N.T		dge Handling/Disposal	N N	Pollution Prevention	
S	Facility Site Review	S	1 -	oliance Sche	edules		<u> </u>		treatment	N	Multimedia	
-	Effluent/Receiving Waters		Labor	•	of Findin	ogs/Com			rm Water ach additional sheets if necessar		Other:	
1.	Calibration checks were not being				or r man	180, 001	ments (uen uuntonui siieets ii neeessui	<i>3)</i>		
Na	me(s) and Signature(s) of Inspector(s	:)			Agency	/Office/	Telepho:	ne/	Fax		Date	
	gon alisan		كوريات	⊢	AR De	pt. of E	nvironm	ent	al Quality-Fayetteville			
Alis	son West				479-26	7-0811 6	ext 12/47	9-2	267-0819		5-29-08	
Sig	nature of Reviewer				Agenc	y/Office	/Phone a	nd	Fax Numbers		Date	
											•	

ADEQ Water NPDES Inspection	AFIN: 04-00106	Permit #: AR0020273

SECTION A: PERMIT VERIFICATION		
PERMIT SATISFACTORILY ADDRESSES OBSERVA	TIONS	☑S □M □U □NA □NE
DETAILS:		
CORRECT NAME AND MAILING ADDRESS OF PERMITTEE:		☑Y □N □NA □NE
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCF	REASED DISCHARGES:	□y □n ☑na □ne
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED	N PERMIT:	⊠y □n □na □ne
4. ALL DISCHARGES ARE PERMITTED:		⊠y □n □na □ne
SECTION B: RECORDKEEPING AND REPORT	ING EVALUATION	
RECORDS AND REPORTS MAINTAINED AS REQUI	RED BY PERMIT	☑S □M □U □NA □NE
DETAILS:		
ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON D	MRS:	⊠y □n □na □ne
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE:		⊠s □m □u □na □ne
a. DATES AND TIME(S) OF SAMPLING:		⊠y □n □na □ne
b. EXACT LOCATION(S) OF SAMPLING:		⊠y □n □na □ne
c. NAME OF INDIVIDUAL PERFORMING SAMPLING:		⊠y □n □na □ne
d. ANALYTICAL METHODS AND TECHNIQUES:		⊠y □n □na □ne
e. RESULTS OF CALIBRATIONS:		⊠y □n □na □ne
f. RESULTS OF ANALYSES:		⊠y □n □na □ne
g. DATES AND TIMES OF ANALYSES:		⊠y □n □na □ne
h. NAME OF PERSON(S) PERFORMING ANALYSES:		⊠y □n □na □ne
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE REC	ORDS ADEQUATE:	□s □m □u ☑na □ne
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT N	IAINTENANCE AND REPAIR:	⊠s □m □u □na □ne
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW	V AND DAILY ANALYTICAL DATA:	□y □n ☑na □ne
SECTION C: OPERATIONS AND MAINTENAN	CE	
TREATMENT FACILITY PROPERLY OPERATED AN	D MAINTAINED	☑S □M □U □NA □NE
DETAILS: Sludge transfer pump, P12 pump, and final clarifie	er pinion gear down at time of inspection.	
TREATMENT UNITS PROPERLY OPERATED:		⊠s □m □u □na □ne
2. TREATMENT UNITS PROPERLY MAINTAINED:		☑S □M □U □NA □NE
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED: (Standby of	generator-manual switch)	☑S □M □U □NA □NE
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURE	ES AVAILABLE:	⊠S □M □U □NA □NE
5. ALL NEEDED TREATMENT UNITS IN SERVICE:		⊠s □m □u □na □ne
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED: 1-IV	, <u>2-III, 1-I</u>	⊠s □m □u □na □ne
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED: Not requ	ired-not a 92-500 facility	□S □M □U ☑NA □NE
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE:		☑Y □N □NA □NE
9. STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLI	SHED:	☑Y □N □NA □NE
10. PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLI	SHED:	□y □n □na ☑ne
11. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN T	THE COLLECTION SYSTEM IN THE LAST YEAR:	Øy □n □na □ne
12. IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED:		⊠y □n □na □ne
13. HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL	BYPASSES/OVERFLOWS:	Øy □n □na □ne
14. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATME	ENT PLANT:	Øy □n □na □ne
15. IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT:		□y Øn □na □ne

ADEQ Water NPDES Inspection	AFIN: 04-00106	Permit #: AR0020273

SECTION D: SAMPLING	
PERMITTEE SAMPLING MEETS PERMIT REQUIREMENTS	☑S □M □U □NA □NE
DETAILS:	
SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT:	☑Y □N □NA □NE
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES:	☑Y □N □NA □NE
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT:	☑Y □N □NA □NE
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT:	MY ON ONA ONE
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT:	☑Y □N □NA □NE
6. SAMPLE COLLECTION PROCEDURES ADEQUATE:	MY ON ONA ONE
a. SAMPLES REFRIGERATED DURING COMPOSITING:	MY ON ONA ONE
b. PROPER PRESERVATION TECHNIQUES USED:	MY ON ONA ONE
c. CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136:	☑Y □N □NA □NE
7. IF MONITORING IS PERFORMED MORE OFTEN THAN REQUIRED ARE RESULTS REPORTED ON THE DMR:	☑Y □N □NA □NE
SECTION E: FLOW MEASUREMENT	
PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS	☐S ☑M ☐U ☐NA ☐NE
DETAILS: Calibration checks are not done correctly. Facility was taking high rea	
reading.	
PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED: TYPE OF DEVICE:	☑Y □N □NA □NE
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED:	☑Y □N □NA □NE
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED:	☑Y □N □NA □NE
4. CALIBRATION FREQUENCY ADEQUATE:	☑Y □N □NA □NE
5. RECORDS MAINTAINED OF CALIBRATION PROCEDURES:	Øy □n □na □ne
6. CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE:	☑Y □N □NA □NE
7. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE:	☑Y □N □NA □NE
8. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES:	☑Y □N □NA □NE
9. HEAD MEASURED AT PROPER LOCATION:	☑Y □N □NA □NE
SECTION F: LABORATORY	
PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS	☑S □M □U □NA □NE
DETAILS:	
1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(B) FOR SLUDGES) :	☑Y □N □NA □NE
2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED:	□Y □N ☑NA □NE
3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT:	☑Y □N □NA □NE
4. QUALITY CONTROL PROCEDURES ADEQUATE:	☑Y □N □NA □NE
5. DUPLICATE SAMPLES ARE ANALYZED ≥10% OF THE TIME:	☑Y □N □NA □NE
6. SPIKED SAMPLES ARE ANALYZED ≥10% OF THE TIME:	☑Y □N □NA □NE
7. COMMERCIAL LABORATORY USED:	☑Y □N □NA □NE
a. LAB NAME: ETG	American Interplex
b. LAB ADDRESS: 1702 E. Central Avenue, Bentonville, AR 72712	600 Kanis Road, Little Rock, AR 72204
c. PARAMETERS PERFORMED: CBOD, TSS, NH3-N, TP, Total Recoverable Copper, Nitrates	iomonitoring
8. BIOMONITORING PROCEDURES ADEQUATE:	☑Y □N □NA □NE
a. PROPER ORGANISMS USED:	☑Y □N □NA □NE
b. PROPER DILUTION SERIES FOLLOWED:	☑Y □N □NA □NE
c. PROPER TEST METHODS AND DURATION:	MY ON ONA ONE
d. RETESTS AND/OR TRE PERFORMED AS REQUIRED:	☑Y □N □NA □NE

ADEQ Water NPDES Inspection	AFIN: 04-00106	Permit #: AR0020273

SECTION G: EFFLUENT/RECEIVING WATERS OBSERVATIONS								
	N VISUAL OBS					Øs □m □	U DNA DNE	
DETAILS:					-			
OUTFALL #:	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOATING SOLIDS	COLOR	OTHER	
001	None	None	None	None	None	Clear		
	1	I	I	!	l	•	1	
SECTION	H: SLUDGE	DISPOSAL						
SLUDGE	SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS							
DETAILS:					·			
1. SLUDGE	MANAGEMENT ADEQU	ATE TO MAINTAIN EF	FLUENT QUALITY:			⊠s □m	□U □NA □NE	
2. SLUDGE F	RECORDS MAINTAINED	O AS REQUIRED BY 40) CFR 503:			⊠s □m	□u □na □ne	
3. FOR LAND	APPLIED SLUDGE, TY	PE OF LAND APPLIE	D TO: (E.G., FOREST,	AGRICULTURAL, PUE	BLIC CONTACT SITE):			
SECTION	II: SAMPLIN	G INSPECTION	ON PROCEDI	JRES				
SAMPLE I	RESULTS WITH	HIN PERMIT R	EQUIREMENT	S		□s □m □	U □NA ☑NE	
DETAILS:								
1. SAMPLES	OBTAINED THIS INSPE	ECTION:				□Y	□N □NA ☑NE	
2. TYPE OF	SAMPLE: GRAB:	COMPOSITE:_ N	METHOD: FREQUE	NCY:				
3. SAMPLES	PRESERVED:					□Y	□N □NA ☑NE	
4. FLOW PR	OPORTIONED SAMPLE	S OBTAINED:				□Y	□N □NA ☑NE	
5. SAMPLE (DBTAINED FROM FACIL	LITY'S SAMPLING DE\	/ICE:				□N □NA ☑NE	
6. SAMPLE F	REPRESENTATIVE OF \	VOLUME AND NATUR	E OF DISCHARGE:			□Y	□n □na ☑ne	
7. SAMPLE S	SPLIT WITH PERMITTER	E:					□n □na ☑ne	
8. CHAIN-OF	-CUSTODY PROCEDUI	RES EMPLOYED:					□N □NA ☑NE	
9. SAMPLES	COLLECTED IN ACCO	RDANCE WITH PERM	IT:			□Y	□N □NA ☑NE	
	IJ: STORM V							
	ATER MANAG			QUIREMENTS			U □NA ☑NE	
	Facilty has a no							
	PDATED AS NEEDED:	 '					□N □NA ☑NE	
2. SITE MAP	INCLUDING ALL DISCH	HARGES AND SURFAC	CE WATERS:				□N □NA ☑NE	
	ON PREVENTION TEAM						□N □NA ☑NE	
	ON PREVENTION TEAM):				□N □NA ☑NE	
	OTENTIAL POLLUTANT						□N □NA ☑NE	
	OTENTIAL SOURCES A						□N □NA ☑NE	
	STORM WATER DISCH	ARGES ARE AUTHOR	IZED:				□N □NA ☑NE	
	TRUCTURAL BMPS:						□N □NA ☑NE	
	ON-STRUCTURAL BMF						□N □NA ☑NE	
	OPERLY OPERATED AN						□N □NA ☑NE	
11. INSPECTI	ONS CONDUCTED AS I	KEQUIKED:				<u>⊔</u> Y	□N □NA ☑NE	

	FLOW CALCULATION SHEET							
Date:	5-28-08	Time: 1:40	p.m.					
Bato.		11110.						
Head in	Head in Inches: Feet: .430							
	Size of Primary F	low Measuren	nent Device:	5 Foot Re	ectangul	ar Weir w/o End		
Contrac	tions							
Nome 0	Model of Coops	dom / Flour Mos	auramant D	ovice IC	20 Dub	bla Flaw Matar		
Model 3	Model of Secon	dary Flow Mea	asurement D	evice: 150		ble Flow Meter,		
IVIOGEI 3	230							
Date of	last Calibration o	f Secondary F	low Device:	January 1	7. 2007			
				Sear Stear y	,			
Recorde	ed Flow at Date 8	Time Listed A	Above: 21 4	40 GPM		(Facility Flow Meter)		
					_			
	ed Flow at Date				th —			
(Flow is cal	culated using flow char	s in: <u>ISCO Open C</u>	hannel Flow Mea	surement Hand	<u>lbook-5[™] E</u>	<u>dition</u>)		
	Recorded V	alue - Cald	culated Valu	е				
% Error	_	Calculated Val		X 100				
% Error	_ 2140	-	2107	X 100				
70 LIIOI	_	2107		X 100				
			1					
% Error	=	X 100						
% Error	_	X 100						
70 LIIOI		χ 100						
% Error	= 1.566	%						
		1						
Comme	nts: OK							

DMR Calculation Check

Reporting Period: From 08 04 01 To 08 04 30 Year Month Day Year Month Day

Ammonia

Parameter Checked: Nitrogen

	Loading Mass	Concentration Monthly				
	Mo. Avg lbs/day	Mo. Avg mg/l	7-day Avg mg/l			
Reported Value:	37.27	.864	1.74			
Calculated Value:	37.27	.864	1.74			
Permit Value:	59	1.6	3.9			

If calculated value does not equal reported value, explain:





June 13, 2008

Certified Letter# 7007 2680 0000 7213 9529

Mr. Dennis Benson Water Division Enforcement Section Arkansas Department of Environmental Quality 5301 North Shore Drive North Little Rock, AR 72118-5317

RE:

AFIN: 04-00106 - NPDES Permit No. AR0020273

Routine Compliance Evaluation Inspection Letter Dated May 29, 2008

Dear Mr. Benson:

Please allow this letter to serve as response from the City of Siloam Springs to the letter dated May 29, 2008 from Ms. Alison West regarding routine inspection of the City's wastewater treatment plant. It should be noted that Ms. West performed her inspection of the wastewater plant on May 28th, that Ms. West drafted an inspection report promptly, but that the City did not receive the letters until June 12th. Ms. West required response from the City within three weeks of the date that she drafted her letter, thus allowing only one week for response from the City.

A violation was cited regarding the method used for staff's routine calibration of the effluent flow meter. Current method uses the average of three field readings of the height gauge at the effluent weir and compares that average to the average height recorded by the meter at the same times that the field readings were taken. The error is calculated by taking the difference between the average field height and the average meter read height and dividing that difference by meter read height. The allowable error of +/- 10% allowed in Section II.5.C.2 of the City's NPDES Permit is then applied to that value.

The method Ms. West is requiring compares the flow rate recorded by the meter to a flow rate manually calculated using the field-read gauge height inserted into a standard formula. We are currently investigating the method used by the meter to determine flow rate from its measured gauge height. Our belief is that the meter software uses the standard formula referenced by Ms. West in her letter. If that is the case, it is appropriate to calculate error by either comparing gauge height readings alone, or to compare calculated flow rates. If we determine that the meter software uses a formula other than the one referenced by Ms. West, we will agree to change procedure and calculate error based on flow rates rather than gauge height readings.

Please also note that the flow meter is certified annually by a licensed inspector. Attached you will find a policy and procedure document along with a calibration log sheet we are currently following.

If you have questions regarding this matter feel free to contact this office.

Sincerely,

Trevor L. Bowman, P.E. by Man Mynn

Water/Wastewater Director

(479) 238-0927

tbowman@siloamsprings.com

Attachment

cc: Peggy Woody, City Clerk

David Cameron, City Administrator

Tom Myers, Wastewater Superintendant

Jay Williams, City Attorney

Parthy Evans, Stinson, Morrison, Hecker

SILOAM SPRINGS, ARKANSAS

August 9, 2003

City of Siloam Springs Water/Wastewater Department

POLICY & PROCEDURE FOR CALIBRATING EFFLUENT FLOW METER

<u>Purpose:</u> The purpose of this Operating Instruction is to outline the procedures to be followed by all employees of the Wastewater department for calibrating the effluent flow meter.

- 1. <u>Scope:</u> This Operating Procedure applies to all Wastewater personnel under the direction of the Superintendent of the Wastewater Department.
- 2. <u>Responsibility:</u> The Wastewater Superintendent & Assistant Wastewater Superintendent will be responsible for the procedure and adherence of the policy in which this policy is outlined. The Wastewater Superintendent will be responsible to discipline any employee, which fails to follow this policy.
- 3. <u>Requirements:</u> The effluent flow must be calibrated a minimum of once per week to assure the accuracy of the flows being reported on the Wastewater Department records. The Wastewater Operators are required to perform this weekly calibration.

4. Procedure:

- Should an employee encounter a situation that requires additional help ,ie another operator is not available, the employee should notify his supervisor.
- b. If the employee cannot retrieve an additional operator then it would be the responsibility of the Supervisor to assist the operator.
- c. Should a problem arise in the calibration effort, the Supervisor should be made aware of the situation.

5. Reports:

The calibration results should be recorded on the form provided. An oral report should be made to the Supervisor if the results of the calibration exceed +/- 10% error of the reported calibration.

6. Records:

It will be the duty of the Wastewater Superintendent to keep records of all effluent flow meter calibration reports. Director of Water & Westewater Utilities:								
Director of Water & Wastewater Utilities:								
Superintendent of Wastewater								
Effective Date:								
By signing below, I agree that I have read and understand this policy/procedure for calibrating the effluent flow meter.								
_								
Date	Name	Initials						
Date	Name							

SILOAM SPRINGS WASTEWATER PLANT EFFLUENT FLOW METER CALIBRATION LOG

		GAUGE		METER		
DATE	TIME	READING	OPER	READING	OPER	% ERROR
			<u>. </u>			

% ERROR = (RECORDED VALUE - CALCULATED VALUE)/CALCULATED VALUE X 100