

May 3, 2010

Honorable Bill Montgomery City of Decatur P.O. Box 247 Decatur, Arkansas 72722

RE: NPDES Permit Compliance Evaluation Inspection

AFIN: 04-00052 NPDES Permit Tracking No.: AR0022292

Dear Mayor Montgomery:

On March 23, 2010, Dale Washam, Inspector Supervisor, and I performed a routine compliance evaluation inspection of the wastewater 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 thereunder. This inspection revealed the following violations:

- 1. Representative samples were not obtained for the first of the three flow-weighted 24-hour composite samples required for Whole Effluent Toxicity (WET) testing for the tests conducted in October 2009 and January 2010. This is in violation of Part II.13.B.4 and Part III.C.1 of the Permit. The chain-of-custody (COC) dated October 19, 2009 indicates that the first composite sample was started at 1130 on October 18, 2009 (Sunday) and ended at 1030 on October 19, 2009. This COC indicates that there was no effluent discharge until October 19, 2009 at 0900. The COC dated January 11, 2010 indicates that the first composite sample was started at 1000 on January 10, 2010 (Sunday) and ended at 0900 January 11, 2010. This COC indicates that there was no discharge on Sunday, January 10, 2010. During the inspection, we discussed with your staff an alternate schedule for WET testing sampling.
- 2. The WET test reports referred to in Item 1 above indicate that moderately hard synthetic water was used to make the required dilutions used in these tests. However, Part II.13.B.3 of the Permit states that the dilution water used in WET tests will be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge. See Part II.13.B.3 for conditions that allow for substitution of synthetic dilution water. If either of these conditions applies to the receiving stream, all supporting documentation must be provided in future WET test reports.
- 3. Grab samples are taken for monitoring of dissolved oxygen (DO), pH, and fecal coliform bacteria (FCB). Grab sample as defined by Part IV.11 of the Permit requires instantaneous flow measurement when a grab sample is collected. Instantaneous flow has not been measured when collecting grab samples.

4. Violations of Part III.C.3 of the Permit:

- a. Duplicate samples are not being taken for pH samples. The procedures described by your operators revealed that replicate samples have been collected rather than duplicates. During the inspection, we discussed with your operators the proper way to collect duplicate samples.
- b. Buffers for pH calibration have been reused on occasion rather than replaced each time the probe/meter was calibrated. To avoid cross-contamination, buffers should be replaced each time the probe/meter is calibrated.
- c. The DO meter has not been calibrated. The meter should be calibrated prior to each use.

5. Violations of Part III.C.8 of the Permit:

- a. The exact location of sample collection was not indicated on the records reviewed for in-house monitoring. This is especially important at your facility in that the sample collection location for pH differs from the sample collection location for DO.
- b. Review of WET test COC forms revealed that for the January 11, 2010 sample, the receiving laboratory failed to sign the COC. In addition, the sample temperature at the time of collection, the number of sample containers, and the method of preservation was not indicated. Although the requested analysis for the sample was written in a column provided for indication of tests to be performed, a check mark was not placed in the box below the column to specify that this test was to be performed on the sample. Similar deficiencies were present in each of the other five COCs provided for the October 2009 and January 2010 WET test samples.
- c. Review of the January 2010 COC forms revealed that for your 6-hour composite samples, a sample collection time of 1000 was indicated for Carbonaceous Biochemical Oxygen Demand (CBOD) and Total Suspended Solids (TSS) on each of the forms. Collection time for the remaining 6-hour composite parameters was listed as 1500. It appears that the sample collector's intent was to show that the composite sampler started at 1000; however, it is necessary that the actual collection time (1500) be indicated on the COC. Also, three samples containers are received by the contract laboratory every week. Each January 2010 COC form identifies only one of the three samples in the rows provided for sample identification. Each of the three sample containers must be individually identified on the COC forms.
- 6. Discharge Monitoring Reports (DMRs) and DMR calculating spreadsheets were reviewed for the months of October, November and December of 2009 and January of 2010. Several reporting errors were found. Explanations of the causes of the errors and/or examples of errors are provided below. Refer to your spreadsheets and associated DMRs where examples of errors are not provided:

October 2009:

- a. The analytical data from September 30, 2009 was included in the October DMR calculating spreadsheet and was used in the October calculations/determinations for all effluent parameters. This resulted in numerous reporting errors.
- b. Nitrate + Nitrite Nitrogen loading was reported as a monthly average rather than as the instantaneous maximum as required by the permit.
- c. There were three Nitrate + Nitrite Nitrogen instantaneous maximum concentration excursions. Only two were reported.
- d. Zero values were erroneously entered in the DMR calculating spreadsheet loading columns for CBOD, TSS, Ammonia Nitrogen (NH3-N), and Total Phosphorus (TP) on dates when no sampling occurred. These dates were counted in the total number of days sampled and were used in the monthly average loading calculations, resulting in the reporting of loading values for each of these parameters that were less than the actual loading values.
- e. The reported frequency of analysis was incorrect for every parameter except flow. For instance, DO analyses frequency was listed as 12/30 (12 times in 30 calendar days); however the actual frequency was 14 times in 31 calendar days.
- f. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR. For example, the detection limit for CBOD when using Standard Method 18th Edition 5210B is 2.0 mg/l. If any one or more CBOD sample analytical results are <2.0 mg/L (non-detectable), then the reported result of any calculations (monthly average mass, monthly average concentration, 7-day average, etc.) that include a concentration below the detection limit should include a less than symbol placed on the result. Note that the detection limit value should be used in the calculations.
- g. There were some instances where reported values had the incorrect number of significant figures. The significant figures of a number are those digits that carry meaning contributing to its precision. The number of significant digits to be used will vary depending on the parameter, the loading limit contained in the permit, or the level of resolution of the analytical method. For example, CBOD, NH3-N, TSS, and DO should be be reported to the nearest tenth of a mg/l. The 7-day average concentration for ammonia nitrogen was reported as 5.83 mg/l. The correct reporting value is 5.8 mg/l. Please note that I provided Mr. James Boston, Public Works Director, with a copy of the ADEQ NPDES Reporting Requirements Handbook following the inspection. The booklet is designed to assist the permittee in complying with the reporting requirements contained in the NPDES permit.

November 2009:

- a. The 7-day average of NH3-N was reported as 2.1 mg/l (average of data from second calendar week) rather than 2.3 mg/l (average of data from third calendar week).
- b. Nitrate + Nitrite Nitrogen loading was reported as a monthly average rather than as the instantaneous maximum as required by the permit.
- c. The reported frequency of analysis was incorrect for Nitrate + Nitrite Nitrogen and TP. Analysis frequency for these parameters was reported as 8/30; however the actual frequency was 9/30.

- d. There were some instances where reported values had the incorrect number of significant figures. For instance, FCB count values should have been rounded to the nearest whole number. Also, the level of resolution for TP analysis when using EPA Method 365.3 is to a tenth of a mg/l. TP 7-day average and monthly average were reported to the hundredth of a mg/L.
- e. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR.

December 2009:

- a. Nitrate + Nitrite Nitrogen loading was reported as a monthly average (78.5 lbs/day) rather than as the instantaneous maximum (165.4 lbs/day) as required by the permit.
- b. The reported frequency of analysis was incorrect for every parameter except flow.
- c. Zero values were erroneously entered in the DMR calculating spreadsheet loading columns for TP on three dates when no sampling for TP occurred. This resulted in the reporting a loading value (8.7 lbs/day) that was less than the actual loading value (11.3 lbs/day).
- d. There were some instances where reported values had the incorrect number of significant figures.
- e. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR.

January 2010:

- a. The TSS 7-day average was reported as 7.0 mg/l. The actual 7-day average was 8.3 mg/l. The Saturday of the calendar week in which the December 28-30, 2009 samples were taken falls in the month of January 2010. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in (refer to the definition in the permit). The average of the TSS concentrations taken the last week of December 2009 (10.0 mg/l, 9.0 mg/l, and 6.0 mg/l) resulted in the highest 7-day average.
- b. The CBOD 7-day average was reported as <2.0 mg/l. The actual 7-day average was <2.3 mg/l. This error is attributable to not applying the Saturday rule as discussed above.
- c. There were some instances where reported values had the incorrect number of significant figures.
- 7. Review of the DMRs and DMR calculating spreadsheets for the months of October 2009 through January 2010 revealed permit limit excursions. The parameters for which limits were exceeded for each of these months are as follows:
 - a. October 2009: Nitrate + Nitrite Nitrogen, Total Phosphorus
 - b. November 2009: Total Phosphorus
 - c. December 2009: Ammonia Nitrogen, Nitrate + Nitrite Nitrogen, Total Phosphorus
 - d. January 2010: Nitrate + Nitrite Nitrogen

Mayor Montgomery, Decatur Wastewater Treatment Plant April 30, 2010 Page 5

The above items require your immediate attention. Please submit a written response to these findings to Cindy Garner, Water Division Enforcement Branch Manager. This response should be mailed to the address provided at the bottom of page 1 of this letter. This response should contain documentation describing the course of action planned to correct/address the items noted. This corrective action should be completed as soon as possible, and the written response is due by May 14, 2010.

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

Despite the items noted above, Mr. Boston and his staff should be commended for an outstanding job operating and maintaining the new treatment plant. Mr. Boston's expertise and diligence is clearly reflected in his continued efforts to achieve consistent compliance with the permit effluent limits. In recent months, very significant progress has been made concerning nutrient removal in the treatment process.

According to Mr. Boston, Peterson Farms and Simmons Foods are to close out the ponds associated with the old wastewater treatment plant. Peterson is to close out two of the ponds and Simmons is to close out the Biolac system pond.

Although the equalization basin is available for diversion of wastewater during power outages, Mr. Boston estimated that 36-48 hours are available during an outage before a hydraulic overload at the basin would occur. A generator of a capacity sufficient for plant operation should be obtained as soon as possible.

If I can be of any assistance, please contact me at 479-267-0811, ext. 16.

Sincerely,

John Fazio

District 1 Field Inspector

Water Division

cc: Water Division Enforcement Branch

Water Division Permits Branch

9	≎ EPA										Form Approved OMB No. 2040-0003								
	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY																		
	NPDES Compliance Inspection Report																		
	Section A: National Data System Coding																		
												pec. Ty	pe	Inspe	ctor	Fac. Type			
1											C		19	20	1				
	Remarks										I I	I	I	Ī	1 1				
L	Inspection Work Days Facility Evaluation Rating BI QA										Reserve	·d							
	67 69	•				uung		71	N	72	N 73		74 75						80
					_		Sec	ction 1	B: Fac	cility	Data								
incl	e and Location of Facility Inspected de POTW name and NPDES permi of Decatur POTW			trial use	rs disc	chargin	ig to	POTV	V, also)	Entry Time/Date 0930 / 03-23-10				Permi June		ective D	ate	
985	Austin Avenue atur, Arkansas 72722										Exit Time/Date 1715 / 03-23-10				Permit Expiration Date May 31, 2014				
	e(s) of On-Site Representative(s)/T													Oth	ner Faci	lity E	Data		
Jan City P.O	e, Address of Responsible Official/ es Boston, Public Works Director of Decatur Box 247 atur, Arkansas 72722		Phone	and Fax	Numb	ber					Contac Yes N]	Ou	tfall 001: 36 20' 37", -94 28' 24"				
	752-3912, 479-752-8336																		
			(S = Satis							uring Inspection sfactory, N = Not E	Evalua	ited)						
S	Permit	S	Flo	v Meası	ireme	nt			S	Op	erations & Mainte	nance	e	M	Sampling				
U	Records/Reports	M	Self	-Monito	ring I	Progra	m		S	Slu	dge Handling/Disp	osal		S	Pollut	ion I	Preventi	on	
S	Facility Site Review	N	Cor	npliance	Sche	dules			N	Pro	etreatment			N	Multi	medi	ia		
S	Effluent/Receiving Waters	M	I .	oratory		-£ E:	J:	-/C	N		rmwater	-4- :e			Other	:			
Section D: Summary of Findings/Comments (Attach additional sheets if necessary) Dale Washam, Inspector Supervisor, and I inspected the new wastewater treatment (SBR) facility. DMRs and DMR calculating spreadsheets were reviewed for the months of October 2009 through January 2010. Biomonitoring reports were reviewed for the months of October 2009 and January 2010. Refer to Pages 14-16 of this report for the violations noted. Peterson Farms and Simmons Foods are to close out the ponds associated with the old wastewater treatment plant. Peterson is to close out two of the ponds and																			
	Simmons is to close out the Biolac system pond. A back-up power generator should be obtained for the plant as soon as possible.																		
	ne(s) and Signature(s) of Inspector(s	s)				AR	Dept.	of E		nmen	Fax tal Quality-Fayette 9-267-0819 (fax)	eville			Date April	21,	2010		
Sig	nature of Reviewer					Age	ency/C	Office	/Phon	e and	Fax Numbers	_			Date				

ADEQ Water NPDES Inspection	AFIN: 04-00052	Permit #: AR0022292

SECTION A: PERMIT VERIFICATION	
PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS	⊠s □m □u □na □n
DETAILS:	
1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE:	⊠y □n □na □n
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES:	⊠y □n □na □n
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT:	⊠y □n □na □n
4. ALL DISCHARGES ARE PERMITTED:	⊠y □n □na □n
SECTION B: RECORDKEEPING AND REPORTING EVALUATION	
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT	S S M MU S NA S N
DETAILS:	
1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRS:	□y ☑n □na □n
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE:	□s ☑m □u □na □n
a. DATES AND TIME(S) OF SAMPLING:	⊠y □n □na □n
b. EXACT LOCATION(S) OF SAMPLING:	□y ☑n □na □n
c. NAME OF INDIVIDUAL PERFORMING SAMPLING:	☑Y □N □NA □N
d. ANALYTICAL METHODS AND TECHNIQUES:	☑Y □N □NA □N
e. RESULTS OF CALIBRATIONS: <u>D.O. Meter has not been calibrated prior to each analysis</u>	□y ☑n □na □n
f. RESULTS OF ANALYSES:	Øy □n □na □n
g. DATES AND TIMES OF ANALYSES:	Øy □n □na □n
h. NAME OF PERSON(S) PERFORMING ANALYSES:	☑Y □N □NA □N
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE: <u>D.O. Meter not being calibrated</u>	□s ☑m □u □na □n
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR:	□s □m □u □na ☑n
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA:	Øy □n □na □n
SECTION C: OPERATIONS AND MAINTENANCE	
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED	☑S ☐M ☐U ☐NA ☐N
DETAILS:	
1. TREATMENT UNITS PROPERLY OPERATED:	Øs □m □u □na □n
2. TREATMENT UNITS PROPERLY MAINTAINED:	Øs □m □u □na □n
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED: <u>EQ basin available – gravity flow to EQ Basin from collection systems.</u> Mr. Boston estimated that 36-48 hours are available before hydraulic overload occurs.	tem. □s ☑m □u □na □n
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE: <u>Auto-Dialer for Influent</u>	⊠s □m □u □na □n
5. ALL NEEDED TREATMENT UNITS IN SERVICE:	⊠s □m □u □na □n
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED: Two Class IV; Two Class II	⊠s □m □u □na □n
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED: Working on new written inventory for essential spare parts	⊠s □m □u □na □n
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE:	☑Y □N □NA □N
9. STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED:	☑Y □N □NA □N
10. PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED: Equalization basin available	☑Y □N □NA □N
11. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR: Collection system	ion ☑Y □N □NA □N
12. IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED: Notification issues have been resolved	Øy □n □na □n
13. HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS: Significant progress in prev	vention Y N NA N
14. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT:	□y Øn □na □n
15. IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT:	□y □n ☑na □n

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SE	CTION D: SAMPLING		
PE	RMITTEE SAMPLING MEETS PERMIT REQUIREMENTS	□s	☑M □U □NA □NE
DE	TAILS:	•	
1.	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:		☑Y □N □NA □NE
5.	SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT:		☑Y □N □NA □NE
6.	SAMPLE COLLECTION PROCEDURES ADEQUATE: Wet Testing: start of 24 hr composite on Sundays must be discontinuous no discharge occurs until Monday morning. Samples obtained during that period have not been representative.	ied as	□y Øn □na □ne
a.	SAMPLES REFRIGERATED DURING COMPOSITING:		☑Y □N □NA □NE
b.	PROPER PRESERVATION TECHNIQUES USED:		☑Y □N □NA □NE
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
SE	CTION E: FLOW MEASUREMENT		
PE	RMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS	✓s	□M □U □NA □NE
	TAILS:	ı	
1.	PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED: TYPE OF DEVICE: 9" Parshall Flum	ne_	☑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:		Øy □n □na □ne
4.	CALIBRATION FREQUENCY ADEQUATE:		☑Y □N □NA □NE
5.	RECORDS MAINTAINED OF CALIBRATION PROCEDURES:		☑Y □N □NA □NE
6.	CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE: <u>However, some months in 2009 revealed % error</u> devices was >10%. In these cases, repeat checks should be performed.	<u>between</u>	☑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:		Øy □n □na □ne
SE	CTION F: LABORATORY		
PE	RMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS	□s	☑M □U □NA □NE
DE	TAILS:	•	
1.	EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(B) FOR SLUDGES) :		ØY □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: D.O. Meter not being calibrated	<u>i</u>	□y Øn □na □ne
4.	QUALITY CONTROL PROCEDURES ADEQUATE: Replicate sample used for pH QC rather than duplicate		□y Øn □na □ne
5.	DUPLICATE SAMPLES ARE ANALYZED ≥10% OF THE TIME: Replicate sample used for pH QC rather than duplicate		□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: Environmental Services Co., Inc. Pace Analytical Services, Inc.		
b.	LAB ADDRESS: 1107 Century Ave., Springdale, AR 72762 9608 Loiret Blvd., Lenexa, KS 66	219	
	PARAMETERS PERFORMED: NH-3-N, NO2+NO3, TP, CBOD, FCB, TSS Chronic Toxicity Tests		
8.	BIOMONITORING PROCEDURES ADEQUATE: <u>Laboratory procedures are adequate; however, sampling schedule must be modified to obtain the three representative flow-weighted composite samples needed for WET testing.</u>	<u> </u>	☑Y □N □NA □NE
a.	PROPER ORGANISMS USED:		☑Y □N □NA □NE
b.	PROPER DILUTION SERIES FOLLOWED: However, receiving water (not affected by the treatment effluent) must be used for diluwater rather than synthetic water unless the City of Decatur can provide documentation of receiving water toxicity.	ition	Øy □n □na □ne
C.	PROPER TEST METHODS AND DURATION:		☑Y □N □NA □NE
d.	RETESTS AND/OR TRE PERFORMED AS REQUIRED:		□Y □N ☑NA □NE

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SECTION	G: EFFLUEI	NT/RECEIVIN	IG WATERS	OBSERVATION	ONS		
BASED ON	VISUAL OBS	ERVATIONS (ONLY			Øs □m	□U □NA □NE
DETAILS:					'		
OUTFALL #:	OIL SHEEN	COLOR	OTHER				
001	none	clear	no odor				
						·L	
SECTION	H: SLUDGE	DISPOSAL					
SLUDGE D	DISPOSAL ME	ETS PERMIT F	REQUIREMEN	TS		Øs □m	□U □NA □NE
DETAILS:	Disposed at To	ntitown landfill					
	ANAGEMENT ADEQU					⊠s∣	□M □U □NA □NE
2. SLUDGE R	ECORDS MAINTAINED	O AS REQUIRED BY 4	0 CFR 503:			□s l	□M □U □NA ☑NE
3. FOR LAND	APPLIED SLUDGE, TY	PE OF LAND APPLIE	D TO: (E.G., FOREST	, AGRICULTURAL, PUI	BLIC CONTACT SITE):		
SECTION	I: SAMPLIN	G INSPECTION	ON PROCED	URES			
SAMPLE F	RESULTS WITH	IIN PERMIT R	EQUIREMENT	rs		□s □m	□U ØNA □NE
DETAILS:							
1. SAMPLES	OBTAINED THIS INSPE	ECTION:					□Y ØN □NA □NE
2. TYPE OF S	AMPLE: GRAB:	□COMPOSITE: N	METHOD: FREQUE	ENCY:			
3. SAMPLES	PRESERVED:						□Y □N ☑NA □NE
4. FLOW PRO	PORTIONED SAMPLE	S OBTAINED:					□Y □N ☑NA □NE
5. SAMPLE O	BTAINED FROM FACIL	LITY'S SAMPLING DE	VICE:				□y □n ☑na □ne
6. SAMPLE R	EPRESENTATIVE OF	VOLUME AND NATUR	E OF DISCHARGE:				□y □n ☑na □ne
7. SAMPLE S	PLIT WITH PERMITTE	E:					□y □n Øna □ne
8. CHAIN-OF-	CUSTODY PROCEDUI	RES EMPLOYED:					□Y □N ☑NA □NE
9. SAMPLES	COLLECTED IN ACCO	RDANCE WITH PERM	IIT:				□Y □N ☑NA □NE
SECTION	J: STORMW	ATER POLL	UTION PREV	/ENTION PLA	N.		
	ATER MANAGE	EMENT MEET	S PERMIT RE	QUIREMENTS		□s □m	□U □NA ☑NE
DETAILS:							
1. SWPPP UF	PDATED AS NEEDED:_	_ DATE OF LAST UP	PDATE:				□Y □N □NA ☑NE
2. SITE MAP	NCLUDING ALL DISCH	HARGES AND SURFA	CE WATERS:				□Y □N □NA ☑NE
3. POLLUTION PREVENTION TEAM IDENTIFIED:							
4. POLLUTION PREVENTION TEAM PROPERLY TRAINED:							
5. LIST OF POTENTIAL POLLUTANT SOURCES:							
6. LIST OF PO	DTENTIAL SOURCES A	AND PAST SPILLS AN	D LEAKS:				OY ON ONA MINE
7. ALL NON-S	TORMWATER DISCHA	ARGES ARE AUTHOR	IZED:				OY ON ONA MINE
	RUCTURAL BMPS:						OY ON ONA MINE
9. LIST OF NON-STRUCTURAL BMPS:							
10. BMPS PROPERLY OPERATED AND MAINTAINED:							
11. INSPECTIO	ONS CONDUCTED AS I	REQUIRED:					□Y □N □NA ☑NE

FLOW CALCULATION SHEET											
Date: 03/	23/10	-	Γime: 13 4	18							
Head in Inc	hes: 11.8	38	Feet:	0.99							
Type & Size	e of Primar	y Flow	Measuren	nent De	vice:	9" Par	sha	II Flum	ie		
Name & Model of Secondary Flow Measurement Device: ISCO 4210 Ultrasonic Flow Meter											
Date of last			•			07/02/0 7 gpm					
Calculated (Flow is calculated	Flow at Da	te & Ti	me Listed	Above:	13	57 gpr	n	oook-5 th		-	w Meter)
% Error =	Recorded		- Calculated Value		Value	_ X 1	00				
% Error =	131	7	1317	1357		— X 1	00				
% Error =	-4(131		X 100								
% Error =	-0.0	3	X 100								
% Error =	-3.0	3	%								
Comments:	Less th	an +/- ′	10%								

DMR Calculation Check

Reporting Period: From 2010 1 1 To 2010 1 31

Year Month Day Year Month Day

Parameter Checked: TSS

	Loading Mass	Concentration Monthly					
	Mo. Avg lbs/day	Mo. Avg mg/l	7-day Avg mg/l				
Reported Value:	59.4	4.27	<u> </u>				
Calculated Value:	59.4	4.3	8.3				
Permit Value:	275.2	15	22.5				

If calculated value does not equal reported value, explain: Values for samples taken on December 28th, 29th, and 30th of 2009 should have been reported as occurring in the month in which the Saturday of the calendar week occurred (see the permit definition for 7-day average).

The calendar week in which the samples were taken was 12/27/09 – 01/02/10. Because 01/02/10 fell on a Saturday, the average of the TSS concentrations for the 12/28/09 – 12/30/09 samples (10.0, 9.0 and 6.0, respectively) should have been reported on the January 2010 DMR because these concentrations resulted in the highest 7-day average.

Also, note that TSS (and CBOD, NH3-N, and DO) concentrations should be rounded to the nearest tenth of a mg/l and reported as such.

DMR Calculation Check

Reporting Period:	From	2009	10	_ 1	To	2009	10	31
	•	Year	Month	Dav	_	Year	Month	Dav

Parameter Checked: Total P

	Loading Mass	Concentration Monthly					
	Mo. Avg lbs/day	Mo. Avg mg/l	7-day Avg mg/l				
Reported Value:	<u>18.4</u>	1.37	2.75				
Calculated Value:	23.4	1.4	2.75				
Permit Value:	18.3	1.0	1.0				

If calculated value does not equal reported value, explain:

In the Calculating Spreadsheet column for Total Phosphorus loading, zero (0) values were

mistakenly entered for the dates of 10/28/09 & 10/31/09. Sampling did not occur on these dates. Also, the data for all samples taken on September 30, 2009 were included in the October 2009 DMR calculating spreadsheet and were included in the calculations for all effluent parameters. TP samples were taken 9 times during October, 2009. Because of the two erroneous zero (0) value entries and the inclusion of the 09/30/09 sample data, the spreadsheet program divided the sum of the TP loading mass (which included the 09/30/09 TP mass) by 12, rather than by 9.

Together, these oversights resulted in reporting errors for many effluent parameters for October 2009.

Erroneous zero (0) entries were present in the 12/09 DMR Calculating Spreadsheet as well.

Also, note that TP should be reported to the level of resolution of the analytical method. Method EPA 365.3 has a resolution of a tenth of a mg/l.

DMR Calculation Check

Reporting Period: From 2009 12 1 To 2009 12 31 Year Month Day Year Month Day

Parameter Checked: FCB

	Loading Mass	Concentration Monthly				
	Mo. Avg lbs/day	Mo. Avg. – CFU/100ml	7-day Avg. – CFU/100ml			
Reported Value:	NA NA	<u>5.11</u>	<u>8.0</u>			
Calculated Value:	NA	<5	<8			
Permit Value:	NA	200	400			

If calculated value does not equal reported value, explain:

Fecal coliform bacteria must be reported to the nearest whole number.

Also, several FCB analytical results for December were less than the detection limit. The detection limit was correctly used in the calculations; however, a less than symbol (<) must be placed on the result if one or more of the results is less than the detection limit. This rule applies to all effluent parameters.

NPDES Compliance Inspection Report Further Explanation

- 1. Representative samples were not obtained for the first of the three flow-weighted 24-hour composite samples required for Whole Effluent Toxicity (WET) testing for the tests conducted in October 2009 and January 2010. This is in violation of Part II.13.B.4 and Part III.C.1 of the permit. The chain-of-custody (COC) dated October 19, 2009 indicates that the first composite sample was started at 1130 on October 18, 2009 (Sunday) and ended at 1030 on October 19, 2009. This COC indicates that there was no effluent discharge until October 19, 2009 at 0900. The COC dated January 11, 2010 indicates that the first composite sample was started at 1000 on January 10, 2010 (Sunday) and ended at 0900 January 11, 2010. This COC indicates that there was no discharge on Sunday, January 10, 2010. During the inspection, we discussed with your staff an alternate schedule for WET testing sampling.
- 2. The WET test reports referred to in Item 1 above indicate that moderately hard synthetic water was used to make the required dilutions used in these tests. However, Part II.13.B.3 of the permit states that the dilution water used in WET tests will be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge. See Part II.13.B.3 for conditions that allow for substitution of synthetic dilution water. If either of these conditions applies to the receiving stream, all supporting documentation must be provided in future WET test reports.
- 3. Grab samples are taken for monitoring of dissolved oxygen (DO), pH, and fecal coliform bacteria (FCB). Grab sample as defined by Part IV.11 of the permit requires instantaneous flow measurement when a grab sample is collected. Instantaneous flow has not been measured when collecting grab samples.
- 4. Violations of Part III.C.3 of the permit:
 - a. Duplicate samples are not being taken for pH samples. The procedures described by your operators revealed that replicate samples have been collected rather than duplicates. During the inspection, we discussed with your operators the proper way to collect duplicate samples.
 - b. Buffers for pH calibration have been reused on occasion rather than replaced each time the probe/meter is calibrated. To avoid cross-contamination, buffers should be replaced each time the probe/meter was calibrated.
 - c. The DO meter has not been calibrated. The meter should be calibrated prior to each use.
- 5. Violations of Part III.C.8 of the permit:
 - a. The exact location of sample collection was not indicated on the records reviewed for in-house monitoring. This is especially important at your facility in that the sample collection location for pH differs from the sample collection location for DO.
 - b. Review of WET test COC forms revealed that for the January 11, 2010 sample, the receiving laboratory failed to sign the COC. In addition, the sample temperature at the time of collection, the number of sample containers, and the method of preservation was not indicated. Although the requested analysis for the sample was written in a column provided for indication of tests to be performed, a check mark was not placed in the box below the column to specify that this test was to be performed on the sample. Similar deficiencies were present in each of the other five COCs provided for the October 2009 and January 2010 WET test samples.
 - c. Review of the January 2010 COC forms revealed that for your 6-hour composite samples, a sample collection time of 1000 was indicated for CBOD and TSS on each of the forms. Collection time for the remaining 6-hour composite parameters was listed as 1500. It appears that the sample collector's intent was to show that the composite sampler started at 1000; however, it is necessary that the actual collection time (1500) be indicated on the COC. Also, three samples containers are received by the contract laboratory every week. Each January 2010 COC form identifies only one of the three samples in the rows provided for sample identification. Each of the three sample containers must be individually identified on the COC forms.

6. Discharge Monitoring Reports (DMRs) and DMR calculating spreadsheets were reviewed for the months of October, November and December of 2009 and January of 2010. Several reporting errors were found. Explanations of the causes of the errors and/or examples of errors are provided below. Refer to your spreadsheets and associated DMRs where examples of errors are not provided:

October 2009:

- a. The analytical data from September 30, 2009 was included in the October DMR calculating spreadsheet and was used in the October calculations/determinations for all effluent parameters. This resulted in numerous reporting errors.
- b. Nitrate + Nitrite Nitrogen loading was reported as a monthly average rather than as the instantaneous maximum as required by the permit.
- c. There were three Nitrate + Nitrite Nitrogen instantaneous maximum concentration excursions. Only two were reported.
- d. Zero values were erroneously entered in the DMR calculating spreadsheet loading columns for CBOD5, TSS, NH3-N, and TP on dates when no sampling occurred. These dates were counted in the total number of days sampled and were used in the monthly average loading calculations, resulting in the reporting of loading values for each of these parameters that were less than the actual loading values.
- e. The reported frequency of analysis was incorrect for every parameter except flow. For instance, DO analyses frequency was listed as 12/30 (12 times in 30 calendar days); however the actual frequency was 14 times in 31 calendar days.
- f. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR. For example, the detection limit for CBOD when using Standard Method 18th Edition 5210B is 2.0 mg/l. If any one or more CBOD sample analytical results are <2.0 mg/L (non-detectable), then the reported result of any calculations (monthly average mass, monthly average concentration, 7-day average, etc.) that include a concentration below the detection limit should include a less than symbol placed on the result. Note that the detection limit value should be used in the calculations.
- g. There were some instances where reported values had the incorrect number of significant figures. The significant figures of a number are those digits that carry meaning contributing to its precision. The number of significant digits to be used will vary depending on the parameter, the loading limit contained in the permit, or the level of resolution of the analytical method. For example, CBOD, NH3-N, TSS, and DO should be reported to the nearest tenth of a mg/l. The 7-day average concentration for ammonia nitrogen was reported as 5.83 mg/l. The correct reporting value is 5.8 mg/l. Please note that I provided Mr. James Boston, Public Works Director, with a copy of the ADEQ NPDES Reporting Requirements Handbook following the inspection. The booklet is designed to assist the permittee in complying with the reporting requirements contained in the NPDES permit.

November 2009:

- a. The 7-day average of NH3-N was reported as 2.1 mg/l (average of data from second calendar week) rather than 2.3 mg/l (average of data from third calendar week).
- b. Nitrate + Nitrite Nitrogen loading was reported as a monthly average rather than as the instantaneous maximum as required by the permit.
- c. The reported frequency of analysis was incorrect for Nitrate + Nitrite Nitrogen and TP. Analysis frequency for these parameters was reported as 8/30; however the actual frequency was 9/30.
- d. There were some instances where reported values had the incorrect number of significant figures. For instance, FCB count values should have been rounded to the nearest whole number. Also, the level of resolution for TP analysis when using EPA Method 365.3 is to a tenth of a mg/l. TP 7-day average and monthly average were reported to the hundredth of a mg/L.
- e. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR.

December 2009:

- a. Nitrate + Nitrite Nitrogen loading was reported as a monthly average (78.5 lbs/day) rather than as the instantaneous maximum (165.4 lbs/day) as required by the permit.
- b. The reported frequency of analysis was incorrect for every parameter except flow.

- c. Zero values were erroneously entered in the DMR calculating spreadsheet loading columns for TP on three dates when no sampling for TP occurred. This resulted in the reporting a loading value (8.7 lbs/day) that was less than the actual loading value (11.3 lbs/day).
- d. There were some instances where reported values had the incorrect number of significant figures.
- e. Some of the reported parameter values should have included a less than symbol (<) placed on the results reported on the DMR.

January 2010:

- a. The TSS 7-day average was reported as 7.0 mg/l. The actual 7-day average was 8.3 mg/l. The Saturday of the calendar week in which the December 28-30, 2009 samples were taken falls in the month of January 2010. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in (refer to the definition in the permit). The average of the TSS concentrations taken the last week of December 2009 (10.0 mg/l, 9.0 mg/l, and 6.0 mg/l) resulted in the highest 7-day average.
- b. The CBOD 7-day average was reported as <2.0 mg/l. The actual 7-day average was <2.3 mg/l. This error is attributable to not applying the Saturday rule as discussed above.
- c. There were some instances where reported values had the incorrect number of significant figures.
- 7. Review of the DMRs and DMR calculating spreadsheets for the months of October 2009 through January 2010 revealed permit limit excursions. The parameters for which limits were exceeded for each of these months are as follows:
 - a. October 2009: Nitrate + Nitrite Nitrogen, Total Phosphorus
 - b. November 2009: Total Phosphorus
 - c. December 2009: Ammonia Nitrogen, Nitrate + Nitrite Nitrogen, Total Phosphorus
 - d. January 2010: Nitrate + Nitrite Nitrogen



Phone: (479) 752-3912

June 16, 2010

Cindy Garner
Water Division Enforcement Manager
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock AR 72118-5317

RE: ADEQ Compliance Evaluation. Permit number AR0022292, AFIN: 04-00052

Dear Ms. Garner,

This letter is in response to the routine compliance evaluation inspection done by Mr. Fazio and Mr. Washam on March 23, 2010. I am responding to the report contents in the order presented in the inspection report.

- 1. The first item dealt with representative sampling on our WET testing procedures. We believed even though we did not always have flow for the 24 hours on the Sunday sample, that this was still representative of the time period to be sampled. After Mr. Washam and Mr. Fazio explained that we could do the sample on another day of the week, to ensure there was 24 hours of flow we worked with our testing lab to make sure we could move our day of sampling up to Monday-Tuesday, we did so. This should not be a problem any longer and a flow weighted recording form was left by the inspectors to insure flow weighted samples are being done correctly and logged on days that WET testing and weekly permit nutrient testing overlap.
- 2. I do not understand exactly what the inspectors are saying in item two pertaining to the dilution water and the creek water. You will have to give me further instructions or clarification if a change needs to be made. I do not feel like it would be fair or representative to our test to use creek water that may or may not have problems associated with it from upstream of the treatment plant discharge. Also for a few months out of the year the stream above the treatment plant discharge is not flowing above ground. Please guide us what to do if this is the case.
- 3. Grab samples during DO, pH and fecal coliform collection was something we did not know about but has been addressed and is now being done during each collection.

- 4. a. Duplicate samples are now being done as instructed during the inspection. b. Buffer solutions for calibration are being replaced at the end of each sample day, to avoid any contamination possibility.
 - c. Calibration is being done of the DO meter as best we can. It does not calibrate the same way as some of the old membrane probes but we are doing it as the inspector proposed and following the owner's manual.
- 5. a. I am not exactly sure what the inspectors are asking here other than we will note on the reporting forms where the pH and the DO are being taken at.

 B. and c. We have a lot of procedural errors being made by both the lab and our staff. We will work diligently to correct these mistakes as listed.
- 6. The DMR's that were reviewed and the numerous comments that were made I am continuing to read through and I will get better at. Some of the items mentioned I am hearing for the first time, and have been implemented in our new permit. One item is that Nitrate poundage be reported as instantaneous. This was not in the old permit, and was not on some of the DMR's sent to me to use after the new treatment plant went on line.

Another item that I did not know and have never been corrected on is when reporting frequency of analysis; I have always reported what was required by the permit not actual sampled days.

One item mentioned was that I have reported zero numbers on my DMR calculating sheet. I do not think these numbers have ever been included in the tabulation as a sample day, and certainly not purposefully. We have placed zeros on the calculating sheet that have only 8 sample days to show us that we did not leave something blank. We will watch this and double check always to make sure this never happens.

I would like to report that as far as back up power goes we have applied with the help of McClelland Consulting Engineers of Fayetteville, for funding help from the Arkansas IKE 2 Disaster Funds for a backup generator for the WWTP, and our busiest lift station on Grant Street. If we do not qualify this time we will keep working to find a way to get this done. First however I feel like dealing with remaining compliance issues is a priority.

I will be going over with our staff at the WWTP each and every noted inspection problem, and work toward solutions.

Ms. Garner I would like to apologize to you and your staff for the lateness of this report. It has just caught up with me and I have worked very late to respond to this report. I knew the report would be coming but with warranty work at the new WWTP I did not follow up as I should have. Everyone who deals with the mail at the City of Decatur will be on the look out for anything from ADEQ and the ADH to make sure it gets responded to promptly in the future. I will follow up with the sewer collection system report before the end of the week.

If you have any questions or comments on this report please call me at 479-752-3912 or e-mail me at <u>jboston.cod@gmail.com</u>.

Sincerely,

James Boston

Public Works Manager

City of Decatur

Decatur Water & Waste Water

P.O. Box 247 • 310 Maple Ave. Decatur, Arkansas 72722

180 3270 \$ 00.440 JUN 16 10 8239 MAILED FROM DECATUR AR 72722

Cindy Garner
Water Division Enforcement Manager
ADEQ
5301 Northshore Drive
North Little Rock AR 72118-5317

7211845317



July 1, 2010

Mr. James Boston
Public Works Manager
City of Decatur
P.O. Box 24
Decatur, AR. 72722

RE: AFIN: 04-00052, NPDES Permit: AR0022292

Dear Mr. Boston:

The Department has received your response to the March 23, 2010 inspection of your facilities by our Field Inspectors, John Fazio and Dale Washam. Your letter appears to adequately address the discrepancies identified during the visit. Your response did pose a question related to the dilution water utilized with the WET testing procedures that are answered in the enclosure included with this letter.

The Department assumes the corrective actions taken will be maintained to ensure consistent compliance with the requirements of the permit. Acceptance of this response by the Department does not preclude any future enforcement action deemed necessary at this site or any other site.

The Department will keep the inspections, responses, and other information on file. If future violations occur that require enforcement action, the Department will consider the inspection and response as required by the Pollution Control and Ecology Commission Regulation No. 7, Civil Penalties. This regulation requires the Department to consider the past history of your company and how expeditiously the violations were addressed in determining any civil penalty that may be necessary for any future violations.

If we need further information concerning this matter, we will contact you. Thank you for your attention to this matter. Should you have any questions, feel free to contact me at 501-682-0640 or you may e-mail me at garner@adeq.state.ar.us.

Sincerely,

Cindy Garner

Water Enforcement Branch Manager

Enclosure

The use of receiving water as dilution water is appropriate according to Section 7 of EPA's "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition October 2002."

ADEQ agrees that it is not appropriate to use receiving water as dilution water when the receiving water has been shown to be toxic.

Part II.13.B.3.b. of the current permit states "If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:..."

ADEQ will grant the City of Decatur the ability to use synthetic dilution water year round provided that documentation of receiving water toxicity is provided.

An example of documenting receiving water toxicity would be to conduct side by side WET tests; one test using synthetic dilution water and one test using receiving water. If the receiving water test has control failures and the synthetic test does not, then a demonstration of receiving water toxicity has been made.

Part II.13.B.3.a. of the current permit states "...The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water where the receiving stream is classified as intermittent or where the receiving stream has no flow due to zero flow conditions."

As per the above referenced permit condition, for the few months out of the year when the receiving stream is not flowing above ground, it is appropriate to use synthetic dilution water.