

June 10, 2009

Gary Smith, Utilities Director City of Van Buren P.O. Box 1269 Van Buren, AR 72957

RE: Compliance Evaluation Inspection on City of Van Buren POTW (South Plant)

AFIN: 17-00062

NPDES Permit No.: AR0021482

Dear Mr. Smith:

On May 19, 2009, I performed a routine compliance 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 thereunder. This inspection revealed the following violations:

- 1. Facility operator is not conducting monthly flow checks on the electronic magnetic meter, which is utilized to measure the discharge flow. The permit requires that this device must be capable of measuring the flow with a maximum deviation of +/- 10%. At time of inspection, the operator was unable to provide any certification for the meter.
- 2. In regard to the dissolved oxygen analysis performed by the operator, facility records did not indicate the analytical method utilized for this test or that duplicate analyses are being performed.
- 3. According to March 2009 chain of custody and contract lab reports, composite samples were collected and analyzed for Total Dissolved Solids, Chlorides, Nitrite + Nitrate Nitrogen, and Total Phosphorus. The permit requires that grab samples be collected for these parameters.

Smith, City of Van Buren June 9, 2009 Page 2

It was also noted during the inspection after reviewing the March 2009 Discharge Monitoring Report, that the plant experienced a permit excursion in regard to the monthly loading average and the monthly concentration for BOD. The DMR indicated that the monthly loading average was 802 lb/d and the permit limit is 776 lb/d. The monthly average concentration was 37 mg/l and the permit limit is 30 mg/l. Facility records did confirm that the Department was notified about this excursion in a letter dated April 14, 2009.

The above items require your immediate attention. Please submit a written response to these findings to Cindy Garner, Water Division Enforcement Branch Manager of this Department. The response should contain documentation describing the course of action taken to correct each item noted. This corrective action should be completed as soon as possible and the written response with all necessary documentations (i.e. picture) is due by June 25, 2009.

If I can be of any assistance, please contact me at 479-452-4822 ext. 11

Sincerely,

Jeff Tyler District 4 Field Inspector Water Division

cc: Water Division Enforcement Branch Water Division Permits Branch

€	EPA		Form Approved OMB No. 2040-0003						
		UNIT	ED STATES ENVIRONMI		N AGEN	CY			
	NPDES	5 (e Inspec	tio	n I	Report		
			-	Section A: Nation			-		
Transaction Code NPDES Yr/Mo/Day Inspective 1 N 2 5 3 A R 0 0 2 1 4 8 2 11 12 0 9 0 5 1 9 17 18 Remarks								pec. Type Inspector Fac. Type C 19 S 20	
A F I N 1 7 - 0 0 6 2 I							Reserved 80		
				Section 1	B: Fac	ility	Data		
inclı City	te and Location of Facility Inspected ude POTW name and NPDES permit of Van Buren POTW (South	numl	per)	harging to POTV	V, also		Entry Time/Date 0830 / May 19 2009		Permit Effective Date March 1, 2009
	1 Port Road Buren, AR 72956						Exit Time/Date 1215 / May 19, 2009		Permit Expiration Date February 28, 2014
	ne(s) of On-Site Representative(s)/Ti n Redo / Environmental Coordin			lber(s)				Co	ner Facility Data ordinates:
Gar P.O	ne, Address of Responsible Official/ y Smith / Utilities Director / 479 . Box 1269 1 Buren , AR 72957						Contacted Yes No 🗹	N 3	cility 35°25'09" 94°20'19"
							uring Inspection sfactory, N = Not Evaluated)		
S	Permit	U	Flow Measuremen		S		erations & Maintenance	U	Sampling
Μ	Records/Reports	U	Self-Monitoring P	Program	S	Slu	dge Handling/Disposal	Ν	Pollution Prevention
S	Facility Site Review	S	Compliance Schee	dules	Ν	Pre	etreatment	Ν	Multimedia
S	Effluent/Receiving Waters	Μ	Laboratory		Ν		rm Water	Ν	Other:
	Section D. Facility records d		Į	8		```	tach additional sheets if necessary or the dissolved oxygen analy	,	
	<u>Section D-</u> March 2009 chain + Nitrogen, Total Dissolved S	n of c Solid	ustody and lab re s, and Total Phos	eports indicate phorus. Permi	that (it requ	com uires	posite samples were collected a grab sample for these para	and	
							ne discharge flow. At tine of i ed to ensure the accuracy of t		ection, the facility was unable to beter is within + or – 10%.
	-				-		rator is performing a duplica		
							ge and the monthly concentra	tion	average for BOD. The
	Department was notified in v Problems with standing wate sealed.		-			-	oox. According to the operato	r, th	e manhole in this location is
Nar Jeff	ne(s) and Signature(s) of Inspector(s Tyler 977)			vironn	nenta	Fax 1 Quality- / Fort Smith / / 479-452-4827		Date June 9, 2009
Sig	nature of Reviewer			Agency/Office	Phone	e and	Fax Numbers		Date

SECTION A: PERMIT VERIFICATION	
PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS	🗹 s 🗆 m 🗇 u 🗆 na 🗠 ne
DETAILS:	
1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE:	Øy 🛛 n 🗆 na 🗆 ne
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES:	
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT:	
4. ALL DISCHARGES ARE PERMITTED:	Øy 🛛 n 🗆 na 🗆 ne
SECTION B: RECORDKEEPING AND REPORTING EVALUATION	
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT	
DETAILS: Facility records do not reference the analytical method for dissolved oxygen.	
1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRS:	
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE:	Øs 🗆m 🗇u 🖾na 🗇ne
a. DATES AND TIME(S) OF SAMPLING:	Øy 🛛 n 🗆 na 🗆 ne
b. EXACT LOCATION(S) OF SAMPLING:	
c. NAME OF INDIVIDUAL PERFORMING SAMPLING:	
d. ANALYTICAL METHODS AND TECHNIQUES:	
e. RESULTS OF CALIBRATIONS:	
f. RESULTS OF ANALYSES:	
g. DATES AND TIMES OF ANALYSES:	
h. NAME OF PERSON(S) PERFORMING ANALYSES:	
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE:	Øs 🗆m 🗇u 🖾na 🗇ne
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR:	Øs 🗆m 🗇u 🖾na 🗇ne
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA:	Øy 🛛 n 🗆 na 🗆 ne
SECTION C: OPERATIONS AND MAINTENANCE	
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED	Øs 🗆 m 🗇 u 🗆 na 🗠 ne
DETAILS:	
1. TREATMENT UNITS PROPERLY OPERATED:	🗹 s 🗆 m 🗇 u 🖾 na 🗇 ne
2. TREATMENT UNITS PROPERLY MAINTAINED:	
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED:	
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES 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-Class III	🗹 s 🗆 m 🗇 u 🖾 na 🗇 ne
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED:	
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE:	Øy 🛛 n 🗆 na 🗆 ne
9. STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED:	
10. PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED:	Øy 🗆n 🗆na 🗇ne
11. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR:	Øy 🛛 n 🗆 na 🗆 ne
12. IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED:	
13. HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS: On-going	
14. HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT:	
15. IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT:	

ADEQ Water NPDES Inspection

AFIN: 17-00062

SECTION D: SAMPLING	
PERMITTEE SAMPLING MEETS PERMIT REQUIREMENTS	□s □m ∅u □na □ne
DETAILS: March 2009 COC and lab reports indicate that TDS, Chlorides, Phosphorus, an	d Nitrite + Nitrogen were
collected by composite rather than grab.	
1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT:	
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES:	
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT:	
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT:	
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT:	
6. SAMPLE COLLECTION PROCEDURES ADEQUATE:	
a. SAMPLES REFRIGERATED DURING COMPOSITING:	
b. PROPER PRESERVATION TECHNIQUES USED:	
c. CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136:	
7. IF MONITORING IS PERFORMED MORE OFTEN THAN REQUIRED ARE RESULTS REPORTED ON THE DMR:	
SECTION E: FLOW MEASUREMENT	
PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS	□s □m ∅u □na □ne
DETAILS: Facility unable to provide certification on the magnetic flow meter.	
1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED: TYPE OF DEVICE:	
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED:	
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED:	
4. CALIBRATION FREQUENCY ADEQUATE: (Date of last calibration	
5. RECORDS MAINTAINED OF CALIBRATION PROCEDURES:	
6. CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE:	
7. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE:	
8. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES:	
9. HEAD MEASURED AT PROPER LOCATION:	
SECTION F: LABORATORY	
PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS	
DETAILS: VB lab records do not indicate that duplicates on being run on Dissolved Oxy	vgen
1. EPA APPROVED ANALYTICAL PROCEDURES USED (40 CFR 136.3 FOR LIQUIDS, 503.8(B) FOR SLUDGES) :	
2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED:	
3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT:	
4. QUALITY CONTROL PROCEDURES ADEQUATE:	
5. DUPLICATE SAMPLES ARE ANALYZED ≥10% OF THE TIME:	
6. SPIKED SAMPLES ARE ANALYZED ≥10% OF THE TIME:	
7. COMMERCIAL LABORATORY USED:	
a. LAB NAME: Data Testing Biomonitoring, Phose	ohorus – American Interplex
b. LAB ADDRESS: 3434 Country Club Fort Smith 8600 Kanis Road	
c. PARAMETERS PERFORMED: TSS, TDS, BOD, Chlorides, Nitrites+ Nitrogen Little Rock , AR	
8. BIOMONITORING PROCEDURES ADEQUATE:	
a. PROPER ORGANISMS USED:	
b. PROPER DILUTION SERIES FOLLOWED:	
c. PROPER TEST METHODS AND DURATION:	
d. RETESTS AND/OR TRE PERFORMED AS REQUIRED:	

AFIN: 17-00062

SECTION G: EFFLUENT/RECEIVING WATERS OBSERVATIONS												
BASED ON VISUAL OBSERVATIONS ONLY 🛛 S 🗆 M 🗇 U 🗆 NA 🗠 NE												
DETAILS:	Receiving wate	ers at Arkansas	River not obser	rved.								
OUTFALL #:	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOATING SOLIDS	COLOR	OTHER					
001	None	None	None	None	Trace	Clear						
SECTION	H: SLUDGE	DISPOSAL										
SLUDGE D	DISPOSAL MEE	ETS PERMIT F	EQUIREMEN	ſS		⊠s ⊡m D]U □NA □NE					
DETAILS:	Records indica	te that 915 met	ric tons were re	moved and land	d applied in 200	<u>3.</u>						
1. SLUDGE M	ANAGEMENT ADEQU	ATE TO MAINTAIN EF	FLUENT QUALITY:			Øs 🗆						
2. SLUDGE R	ECORDS MAINTAINED	D AS REQUIRED BY 40) CFR 503:			⊠s ⊡i						
3. FOR LAND	APPLIED SLUDGE, TY	PE OF LAND APPLIE	D TO: (E.G., FOREST,	AGRICULTURAL, PUB	LIC CONTACT SITE):							
SECTION	I: SAMPLIN	G INSPECTIO	ON PROCEDU	JRES								
SAMPLE R	ESULTS WITH	HIN PERMIT R	EQUIREMENT	S		OS OM C]U ∅NA □NE					
DETAILS:												
1. SAMPLES	OBTAINED THIS INSPE	ECTION:				<u>`</u>	(□n ∅na □ne					
2. TYPE OF S	AMPLE: GRAB:		IETHOD: FREQUE	NCY:								
3. SAMPLES	PRESERVED:					<u> </u>	r ⊡n Øna ⊡ne					
4. FLOW PRC	PORTIONED SAMPLE	S OBTAINED:					r ⊡n Øna ⊡ne					
5. SAMPLE O	BTAINED FROM FACIL	LITY'S SAMPLING DEV	ICE:			<u>`</u>	r ⊡n ⊠na ⊡ne					
6. SAMPLE R	EPRESENTATIVE OF	VOLUME AND NATUR	E OF DISCHARGE:			<u>, D</u>	(□n Øna □ne					
7. SAMPLE SI	PLIT WITH PERMITTER	E:					(□n Øna □ne					
8. CHAIN-OF-	CUSTODY PROCEDU	RES EMPLOYED:					r ⊡n Øna ⊡ne					
9. SAMPLES	COLLECTED IN ACCO	RDANCE WITH PERM	IT:			D '	(□n Øna □ne					
				ENTION PLA	AN							
			-	QUIREMENTS]U ∅NA □NE					
DETAILS:	Facility has been	en granted No E	Exposure Certifi	cation, tracked	under permit #							
1. SWPPP UP	DATED AS NEEDED:	_ DATE OF LAST UP	DATE:									
2. SITE MAP I	NCLUDING ALL DISCH	HARGES AND SURFAC	CE WATERS:									
	N PREVENTION TEAM											
4. POLLUTIO	N PREVENTION TEAM	PROPERLY TRAINED	:									
5. LIST OF PC	DTENTIAL POLLUTAN	SOURCES:										
	DTENTIAL SOURCES A											
7. ALL NON-S	TORM WATER DISCH	ARGES ARE AUTHOR	IZED:									
	RUCTURAL BMPS:											
9. LIST OF NO	ON-STRUCTURAL BMF	PS:										
10. BMPS PRO	PERLY OPERATED A	ND MAINTAINED:										
11. INSPECTIC	NS CONDUCTED AS I	REQUIRED:				· · · · · · · · · · · · · · · · · · ·	r ⊡n ⊠na ⊡ne					

AFIN: 17-00062

FLOW CALCULATION SHEET												
Date:	05-19-09		Time	: NA								
Head in Inches: NA Feet: NA												
T		····										
Туре & NA	Size of Pi	rimary F		asuren	nent D	evice:						
Name &	Model of	Secon	dary Flo	w Mea	surem	ent D	evice					
Krohne	lfcoid											
					<u> </u>							
Date of NA	last Calib	ration of	fSecond	dary F	low De	evice:						
	ed Flow a	t Date 8	Time I	isted A	hove.	2.0	10			(Fac	cility Flo	w Meter)
11000100						2.0				<u>(1 ac</u>		
	ted Flow a											
(Flow is cal	Iculated using	g flow chart	s in: <u>ISCO</u>	Open C	hannel Fl	ow Mea	sureme	nt Hand	<u>book-5^m</u>	Editior	<u>n -Table</u>	<u>e # 13-6)</u>
	Reco	orded V	alue -	Calo	culated	l Valu	e 🗸					
% Error	=	(Calculate				X	100				
				T					1			
% Error	=		-				— x	100				
% Error	=		X	100								
% Error	=		X	100								
% Error	_		%									
	-		/0	י <u> </u>								
Comme	nts: Fac	<u>:ility u</u> ti	ilizes a i	magn	etic flo	<u>w m</u> e	eter a	nd a f	low cl	neck	<u>k was</u>	unable to
be perfe	ormed. F	acility v	vas una	ble to	provi	de the	e cert	ificat	ion on	the	mete	er.

ADEQ Water NPDES	S Inspection	AFIN	: 17-00062		Pe	ermit #: AR002	1482	
		DN	IR Calculat	tion Che	ck			
Reporting Period:	From	09 Year	03 Month	01 Day	_ To	09 Year	03 Month	31 Day
Parameter Checked	: <u> </u>	OD	_					
		oading Mass					ntration nthly	
	1	v1a55						
		vg lbs/	day	Mo. A	vg	mg/l	•	g mg/l
Reported Value:			'day	Mo. A	avg 37		•	
Reported Value: Calculated Value:		vg lbs/	'day	Mo. A			7-day Avg	
-		vg lbs/ <u>802</u>	'day	Mo. A	37		7-day Avg	

If calculated value does not equal reported value, explain:Equal-permit excursion wasNoted. City of Van Buren reported this to the Department on April 14, 2009.

ADEQ Water NPDES	Inspection	AFIN	l: 17-00062		Pe	ermit #: AR002	1482				
DMR Calculation Check											
Reporting Period:	From _		<u>03</u>	<u>01</u>	То		<u>03</u>	<u>31</u>			
		Year	Month	Day		Year	Month	Day			
Parameter Checked	:	TSS	_								
	Loading Mass						Concentration Monthly				
	Mo. A	vg lbs	/day	Mo. A	vg	mg/l	·	g mg/l			
Reported Value:		638			30		31				
Calculated Value:		638			30		31				
Permit Value:		2327			90		135	5			

If calculated value does not equal reported value, explain: <u>Equal</u>

VAN BUREN MUNICIPAL UTILITIES

"Providing Water, Sewer, and Sanitation Services" 2806 Bryan Road / P.O. Drawer 1269 Van Buren, Arkansas 72957 479-474-5067 / Fax 479-471-8969 Gary Smith, Director



June 19, 2009

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

Re: Compliance Evaluation Inspection, May 19, 2009, Van Buren Main Plant, AFIN: 17-00062 Permit # AR0021482

Dear Ms. Garner:

In response to the Compliance Evaluation Inspection performed by Mr. Jeff Tyler on May 19, 2009;

1. We have obtained a Calibration Certificate from the manufacturer. (Copy attached) We have also obtained a recommended schedule for a certification cycle for the Khrone magnetic inductive flow meter (Copy attached). At this time, we would like to request that the monthly flow check requirement be changed to once every twelve (12) months as recommended by the manufacturer.

2. In regard to the dissolved oxygen analysis, the operator is now indicating the analytical method and performing the required duplicate analyses.

3. The March 2009 chain of custody was filled out incorrectly, grab samples were actually collected and analyzed for Total Dissolved Solids, Chlorides, Nitrate + Nitrite Nitrogen, and Total Phosphorus, the operator has corrected the chain of custody forms.

If you have any questions or require further information please contact me.

Sincerely, Steve Dufresne

Operations Superintendent

Cc: Correspondence file, Main Plant file

LAIN 30 300-18-4.2.2

Customer / Kunde / Client	: BAUMAN INSTRUMENT CORPORATION
Customer Order / Bestellnummer / Commande Client	: 24932
Product / Produkt / Produit	:
Type / Typ / Type	: OPTIFLUX 2000 DN 400 mm/ 16 inch
Sales Order / VK-Auftrag / Commande de vente	: 27000268 70 1
Serial Number / Seriennummer / Numéro de série	: A08 64865
Tag Number / Tagnummer / Repère	: FE/FIT-205

Calibration Method / Kalibriermethode / Méthode d'étalonnage

The flow sensor has been calibrated against a fixed-volume tank. The calibration certificate of this tank registers the traceability to national standards, which establishes the physical units of measurements according to the International System of Units (SI).

Die Prüfung des Durchflussmessgeräts erfolgt im Vergleich zu einem Messbehälter. Die Kalibrierung des Messbehälters ist rückführbar auf Nationale Standards. Die physikalischen Einheiten sind nach dem SI-System definiert.

Le capteur de mesure a été étalonné avec un réservoir à volume fixe. Le certificat d'étalonnage de cet étalon prouve la traçabilité aux étalons nationaux qui utilisent des unités de mesures physiques selon le Système International (SI).

Test Equipment Data / Kalibrierstanddaten / Données du b	ano	c d'étalonnage
Serial Number / Seriennummer / Numéro de série		A4
Calibration fluid / Kalibrierflüssigkeit / Fluide d'étalonnage	:	Water / Wasser / Eau
Uncertainty / Unsicherheit / Incertitude		0.03 %

Calibration Results / Kalibrier Resultats / Résultats d'étalonnage

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Flow Rate Durchflussmenge Débit (%)	Set Flow rate Gewählte Durchfluss Débit réglé (m3/h)	Deviation Abweichung Ecart (%)	
94.25	1279.1308	+0.01	
20.83	282.6981	-0.01	

Calibration Data / Kalibrierdaten / Données d'étaionnage

GK : 3.1053 G GKI : 6.2779 G

GKh : GK070 :

Date / Datum / Date : 2008-12-03

Signature / Unterschrift / Signature/

KROHNE Altomater, Kerkeplaat 12, 3313 LC Dordrecht, Nederland, Tel.:+31 (0)78 6306 300, Fax.:+31 (0)78 6306 390, www.KROHNE.com

KROHNE

KROHNE, Inc. • 7 Dearborn Rd Peabody MA 01960

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June 19, 2009

Richard Lowrie Water and Wastewater Industry Manager Tel: 800.356.9464 x 1213 Fax: 978.826.6953 r.lowrie@krohne-inc.com

Mr. Steve Dufresne Van Buren Municipal Utilities PO Box 1269 Van Buren AR 72957

Mr Dufresne:

The letter is in response to a request for a recommended schedule for a certification cycle for KROHNE magnetic inductive flow meters.

Magnetic inductive flow meters are designed for years of trouble free service. Certification of most inductive magnetic flow meters is accomplished by 4 standard tests:

- 1. Resistance check of Electrodes
- 2. Resistance check of Coils
- 3. Linearity of outputs
- 4. ADC check

Numbers 1 and 2 above check the tube for leakage, coating or interconnecting cable breakages or electrical shorts.

Number 3 checks outputs for correct values

Number 4 checks the Analog to Digital conversion of the flow signal.

When performed these checks can certify a magnetic inductive flow meter is with in 1% of its condition when originally calibrated.

These measurements are also the basis for a magnetic flow meter's operation.

The only wetted components of a magnetic inductive flow meter are the electrodes and the tube liner. The tube is built out of stainless steel and the liner is over 5mm's in thickness, the electrodes are either stainless steel or hastelloy C as a standard material. A long history of operation shows that these components have a mean time between failures of over 20 years. The IFC010 converter has been in production since the mid 1990's and also has a mean time between failure of over 20 years. For this reason

KROHNE, inc. + 7 Dearborn Road + Peabody MA 01960 + T: 800-FLOWING (978-535-6060 in MA) + F: 978-535-1720 + E: Info@KROHNE.com + W:www.KROHNE.com

most customers using KROHNE magnetic inductive flow meters do not recertify their meters unless a fault occurs and a component has been repaired or replaced.

KROHNE realizes the need for certification of flow meters, especially when government regulations are concerned. KROHNE also realizes that to several governmental agencies magnetic flow meters are not a traditional flow measurement method. The methods normally used for flow measurement have been weirs, or other open channels utilizing a level detecting device. The level was converted to flow from tables provided by the channel manufacturer or standard calculations which are widely published. The certification of these devices is accomplished with a check of the level devices accuracy. This check was easily accomplished by placing a target under the level measuring device (if the device measured free space) or placing the sensing element in a bucket of process fluid to the desired levels and then recording output.

A magnetic inductive flow meter obtains flow rates by measuring the velocity of the fluid, the volume of the fluid is derived from the cross sectional area of the measuring tube. Unlike open channels there is very little possibility of failure of the tube. The electrodes are tied to a high impedance circuit which will ignore coatings and the tube if damaged to the point of measurement error will cause a fault in the electronics. Due to the high mean time between failures of the components in KROHNE magnetic inductive flow meters customers who require a certification do so on a 12 to 18 month cycle. Even the Hydraulics Institute recommends 12 months for certification of magnetic inductive flow meters.

Because certification of a magnetic inductive flow meter requires access to the electronics and removal of wiring, KROHNE also recommends this 12 to 18 month cycle to lessen the probability of operator/technician error and possible damage to the electronics. (this is unlikely but must be considered if frequency of testing is increased)

I hope I have addressed your concerns with certification of magnetic inductive flow meters. If you have any other questions please contact me at your convenience.

Respectfully

Richard Lowrie Water and Waste Water Industry Manager KROHNE

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KROHNE, Inc. + 7 Dearborn Road + Peabody MA 01960 + T: 800-FLOWING (978-535-6060 in MA) + F: 978-535-1720 + E: Info@KROHNE.com + W:www.KROHNE.com

VAN BUREN MUNICIPAL UTILITIES

P. O. DRAWER 1269 VAN BUREN, AR 72957

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FIRST CLASS Recycle 3069898 JUN 23 2009 ED FROM ZIP CODE 72956 003069898

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POSTAGE DUE 44

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