From: Torrence, Rufus

Sent: Tuesday, November 13, 2012 1:31 PM

To: Gary Smith (vbeasy@aol.com)
Cc: Kim Redo (kimredo@aol.com)

Subject: AFIN 17-00062 AR0021482 & AFIN 17-00565 AR0040967 City of Van Buren

2011 Annual Report

Attachments: Ltr TBLL MAHL Development 20120817.pdf; VNBN SOUTH Conventionals TBLL

WorkSheet 20121108.pdf; VNBN NORTH Conventionals TBLL Worksheet 20121108.pdf; North WWTP Inf Eff Chart.doc; South WWTP Inf Eff Chart.doc;

VNBN 2011 Annual Report Cover Letter-ICIS.pdf



November 13, 2012

Gary Smith, Director City of Van Buren P O Drawer 1269 Van Buren, AR 72956

Re: City of Van Buren 2011 Annual Report

(Permit No. AR0021482, AFIN 17-00062 & AR0040967, AFIN 17-00565)

Dear Mr. Smith:

The Department has reviewed the City's 2011 Annual Report. The report is complete. However, the Department has concerns:

1. The City has demonstrated that local limits for CBOD₅ and TSS are not necessary at this time. Nonetheless, the department will review the CBOD₅ and TSS Maximum Allowable Headworks Loads (MAHLs) annually to ensure no significant increase in loadings (Refer to the attached department letter dated August 17, 2012). Therefore, the Department is asking the City to report quarterly CBOD₅, TSS and NH3-N loadings in future annual reports. **Please report the maximum daily loading in each quarter and not the average loading**. Please find attached updated Influent-Effluent charts. The chart shows MAHLs for CBOD₅, TSS and NH3-N. The City should review the attached Excel spreadsheets (PDF copies) which show the derivation of the loadings for each plant. Copies of the complete Excel Workbooks with supporting documentation were made available to the City during the last pretreatment audit in June 2012. Please note that the MAHLs are "pretreatment standards for the purposes of ...section 307(c) of the Act" pursuant to 40 CFR 403.5(d).

- 2. The City reported that Simmons Food discharged a slug load to the POTW. In accordance with 40 CFR 403.8(2)(vi), the City must "Evaluate whether each such Significant Industrial User needs a plan or [Best Management Practices] to control Slug Discharges". In accordance with paragraph (j) in Section 2. 7 (Contents of Permit) of Ordinance # 26-2009, the City has the authority to include in Simmons' permit the "Requirement to Control Slug Discharges…". Please note that if an SIU discharge (normal or slug) causes the City to exceed the MAHL for a parameter (CBOD₅, TSS, etc.), the City can be cited for a violation of 40 CFR 403.5(d) for failing to prevent Interference [40 CFR 403.3(k) & 403.5(b)(4)] even if no Pass Through [40 CFR 403.3(p)] occurs.
- 3. The City must send the Department the recorded maximum daily CBOD₅ and TSS loading (lbs/day) at the South POTW headworks which occurred during the slug loading from Simmons.

The Department appreciates the City's cooperation with the concerns listed above.

If you have any questions or need more information, please contact the Department at (501) 682-0626 or by email at torrence@adeq.state.ar.us.

Sincerely,

Rufus Torrence, Pretreatment Engineer

The Jovence

Water Division

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
9301 NORTHSHORE DRIVE / NORTH LITTLE ROCK / ARKANSAS 72318-5317 / TELEPHONE 501-682-0744 / FAX 501-687-0880
www.gdeg.store.ongs

APRLN RY

VAN BUREN MUNICIPAL UTILITIES

PROVIDING WATER, SEWER AND SOLID WASTE SERVICES 2806 BRYAN ROAD PO DRAWER 1269

> Steve Dufresne, Manager (479) 474-5067 Fax (479) 471-8969

October 29, 2012

Mr. Rufus Torrence Pretreatment Coordinator NPDES Branch Arkansas Department of Environmental Quality 5301 North Shore Drive North Little Rock, Arkansas 72218

Re: Permit #AR0021482, #AR0040967, & #AR0037567

Annual Pretreatment Report for 2011

Certified Mail # 7011 2970 0002 2763 8733

Dear Mr. Torrence:

Please find our Annual Pretreatment Program Report. The report contains the following:

Cover Page I. II. Influent-Effluent Chart for Main Plant – Table III III. Influent-Effluent Chart for North Plant III.Attachment A -- PPS Report Updated SIU List Attachment B -- Significant Violations - Enforcement Action IV. Attachment C – PPS (1st page) V. Attachment C – PPS (2nd page) VI. If you have any questions feel free to contact our office. Sincerely, Steve Dufresne Director Cc: Lorraine Spahn, ADEQ Kim Redo, VBMU Environmental Coordinator North & South Plant files

W

PPS Program Report	*NPDES ID: AR	0921482 Permittee's Name Van Wren
	* Report Received/Event Date: 100	131/2012 Date 11-8-2012
agt Type		
se special soprain Report of any		
C Biosolids Program Report	FR 01/13 75 67	Pretreatment Performance Summary Report
CAFO Annual Report	1R ØØ37567 1R ØØ 4Ø967	C SSO Annual Report
C CSO Event Report	- KARAMADE	C SSO Event Report
C Local Limits Report		C SSO Monthly Event Report
C MS4 Program Report		C Storm Water Event Report
Construction and the same and t	formation	Local Eimits
* Pretreatment Performance Summary Start Date:	10/01/2011	Date of Most Recent Technical Evaluation & or Local Limits:
Significant indus	rial Users (SIUs)	Date of Most Recent Adoption of Technically Based Local Limits:
SiUs:	9	Local Limit Pollutarits:
SIUs Without Control Mechanism:		
SIUs Not Inspected:		
SIUs Not Sampled:		
SIUs in SNC with Pretreatment Standards:		Removal Credits
SIUs in SNC with Reporting Requirements:		Removal Credits Application Status: Not Applicable
SIUs in SNC with Pretreatment Schedule:		Date of Most Recent Removal Credits Approval
SIUs in SNC Published in Newspaper:		Removal Credits:
SIUs Schedules:		
Violation Notices Issued to SIUs:	National Control of the Control of t	
Administrative Orders Issued to SIUs:		A POR REMOVES
Civil Suits Filed Against SlUs:	F	Acceptance of Waste
Criminal Suits Filed Against Slus:		Acceptance of Hazardous Waste: No Acceptance of Non-Hazardous Industrial Waste: No Is
Calegorical Indus	IIBI Users (citis)	0
CIUs:		Deficiencies
CIUs in SNC:		Deficiencies Identified During IU File Review: No
Penz		Control Mechanism Deficiencies: No
Dollar Amount of Penalties Collected: 9	6586	Legal Authority Deficiencies: No
strial Users (IUs) from which Penalties have been collected:	Marie Control of the	Deficiencies in Data Management and Public No Participation:
Other Info	ormation	Deficiencies in Interpretation and Application of No Pretreatment Standards:
SUO Reference:	PARTITION OF THE PARTIT	Inadequacy of Sampling and Inspections: No
SUO Date:	State and the state of the stat	Adequacy of Pretreatment Resources: Yes
Annual Pretreatment Budget: §	PARTICULAR AND	Annual Frequency
Pass-Through/Interference Indicator:		Annual Frequency of Influent Toxicant Sampling:
ation of IU Schedule for Remedial Measures:	No 🛪	Annual Frequency of Effluent Toxicant Sampling:
nal Response to Violation of IU Schedule for		Annual Frequency of Sludge Toxicant Sampling:
Remedial Measures:		



August 17, 2012

Gary Smith, Director City of Van Buren P O Drawer 1269 Van Buren, AR 72956

Re: City of Van Buren Pretreatment Program Audit Response & TBLL/MAHL Development (Permit No. AR0021482, AFIN 17-00062)

Dear Mr. Smith:

In reference to Van Buren Municipal Utilities (VBMU) letters dated July 12, 2012 (WER development) and August 6, 2012 (Pretreatment Audit Response), VBMU has concluded that local limits are not necessary at this time.

Since VBMU has decided not to develop local limits at this time and has demonstrated that local limits are not necessary, no further efforts on local limits development are required at this time. Please be advised, Part II.12.b on page 9 of the NPDES permit requires VBMU to re-evaluate the need for local limits based on any changes to the City's SIUs. This will be reviewed by the Department on an annual basis along with the submitted annual report.

If you have any questions or concerns, please contact the Department at (501) 682-0626 or torrence@adeq.state.ar.us.

Sincerely,

Rufus Torrence,

ADEQ Engineer

MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT

REPORTING YEAR: ________, <u>20</u> TO _______, <u>20</u>
TREATMENT PLANT: <u>City of Van Buren</u> NPDES PERMIT <u>#AR0040967</u> AVERAGE POTW FLOW: MGD % IU FLOW: %

METALS,	МАНС	:	INFLUENT DA	ATES SAMPLE	ED	WQ	E		ATES SAMPLI g/l)	ES SAMPLED		BORATORY AN	NALYSIS
CYANIDE and PHENOLS	(Total) (μg/l) (2)	Once/quarter				level/ limit (μg/l) (2)			quarter		EPA MQL	EPA Method	Detection Level
		Date	Date	Date	Date	(2)	Date	Date	Date	Date	(μg/l) (1)	Used (1)	Achieved (μg/l)
Antimony	N/A					N/A					60.0		
Cadmium	5.58					1.84					0.5		
Copper	31.58					9.24					0.5		
Lead	10.84					2.71					0.5		
Mercury	0.03					0.0134					.005		
Nickel	167.18					96.96					0.5		
Selenium	11.16					5.58					5.0		
Silver	3.73					0.93					0.5		
Zinc	167.71					85.53					20.0		
Chromium	748.99					295.4					10.0		
Cyanide	187.2					5.8					10.0		
Arsenic	341.2					348.96					0.5		
Molybdenum	307.1					N/A							
Phenols	N/A					N/A					5		
Beryllium	11.83					5.91					0.5		
Thallium	N/A					N/A					0.5		
Flow, MGD	N/A					N/A							
BOD5 (lbs/day)	3336.0					10 May-Oct 20 Nov-Apr							
TSS (lbs/day)	3336.0					15 May-Oct 20 Nov-Apr							
NH3-N (lbs/day)	417.0					2.2 Apr 2.0 May-Oct 4.0 Nov-Mar							
(3)													

- (1) It is advised that the influent and effluent samples are collected considering flow detention time through each plant. Analytical MQLs must be met for the effluent (and SHOULD be met for the influent) so the data can also be used for Local Limits assessment and NPDES application purposes.
- (2) This value was calculated during the development of TBLL based on State WQ criteria, EPA guidance and either ADEQ Pretreatment staff Excel spreadsheets or the Permittee's consultant with concurrence from Pretreatment staff. CBOD₅, TSS and NH3-N limits are in mg/l.
- (3) Record the name of any pollutant [40 CFR 122, Appendix D, Table II and/or Table V] detected and the concentration at which they were detected.

MAHL - Maximum Allowable Headworks Level / MAHC – Maximum Allowable Headworks Concentration For BOD₅, TSS & NH3-N, in each quarter show the maximum daily loading and the maximum daily effluent concentration.

WQ - "Water Quality Levels not to exceed" OR actual permit limit.

ATTACHMENT A

PRETREATMENT PROGRAM STATUS REPORT UPDATED SIGNIFICANT INDUSTRIAL USERS LIST

Industrial User Name	SIC/NAICS Code	40 CFR XXX	Con Doci	trol ument	New User	Times Inspected	Times Sampled	Compli	iance Status (N/A, C,	NC, or SNC)	Permit Limits (also denote those
Name	code	or N/A	Y/N	Last Action	0001	1110100000		BMR	90-day Compliance	Semi Annual	Self Monitoring	violated & number of times)

Please footnote N/A reason

ATTACHMENT B

SIGNIFICANT VIOLATIONS - ENFORCEMENT ACTIONS TAKEN

Industrial User	Nature Violat	e of Lion		Numbe	r of Act	ion Taken		Penalties	Compli Sched	ance dule	Current	Comments
Name	Reports	Limits	N.O.V.	A.O.	Civil	Criminal	Other	Collected	Date Issued	Date Due	Status	Commency

ATTACHMENT C

PRETREATMENT PERFORMANCE SUMMARY (PPS)

NOTE: ALL QUESTIONS REFER TO THE INDUSTRIAL PRETREATMENT PROGRAM AS APPROVED BY ADEQ.

THE PERMITTEE SHOULD NOT ANSWER THE QUESTIONS BASED ON CHANGES MADE TO THE APPROVED PROGRAM WITHOUT DEPARTMENT AUTHORIZATION.

I. General Information

Con	trol Authority Name		_
Add:	ress		_
Cit	y State/Zip		
Con	tact Person	Position	
Con	tact Telephone NPDES Permit	it Nos.	
Repo	orting Period		_
	(Beginning Month and Year)	(Ending Month and Year)	
Tota	al Number of Categorical IUs		
Tota	al Number of Significant Noncategorical :	IUs	
Tota	al Number of Non-Significant (yet permit	cted) IUs	
	II. Significant Industria	al User Compliance	
		SIGNIFICANT INDUSTRIAL USERS Categorical NonCategorical	
1)	No. of SIUs Submitting BMRs/Total No. Required	<u>/</u> <u>N/A*</u>	
2)	No. of SIUs Submitting 90-Day Compliance Reports/No. Required		
3)	No. of SIUs Submitting Semiannual Report Total No. Required		
4)	No. of SIUs Meeting Compliance Schedule, Total No. Required to Meet Schedule		
5)	No. of SIUs in Significant Noncompliance Total No. of SIUs	ce/ 	
6)	Rate of Significant Noncompliance for a SIUs (categorical and noncategorical		

III. Compliance Monitoring Program

			SIGNIFICANT I	NDUSTRIAL USERS
			Categorical	NonCategorical
1)		Control Documents Issued/Total No. red	/	/
2)	No. of	Nonsampling Inspections Conducted	/	/
3)	No. of	Sampling Visits Conducted	/	
4)	No. of	Facilities Inspected (nonsampling) .	/	/
5)	No. of	Facilities Sampled		/
		IV. Enforcement Act	ions	
			SIGNIFICANT Categorical	INDUSTRIAL USERS NonCategorical
1)		Compliance Schedules Issued/No. nedules Required	/	/
2)	No. of	Notices of Violations Issued to SIUs		
3)	No. of	Administrative Orders Issued to SIUs		
4)	No. of	Civil Suits Filed		
5)	No. of	Criminal Suits Filed		
6)		Significant Violators (attach aper publication)		
7)		of Penalties (not surcharges) ted (total dollars/IUs assessed)	/_	/
8)	Other	Actions (sewer bans, etc.)		
	follow	ving certification must be signed in o	rder for this	form to be considered
	ertify my know	that the information contained herein ledge.	is complete a	and accurate to the best
		Authorized Representative	Date	

MONITORING RESULTS FOR THE ANNUAL PRETREATMENT REPORT

REPORTING YEAR: ________, <u>20</u>__TO _______, <u>20</u>__

TREATMENT PLANT: City of NPDES PERMIT #AR0021482

AVERAGE POTW FLOW: MGD % IU FLOW: %

METALS, CYANIDE and PHENOLS	MAHC (Total) (μg/l)	1		ATES SAMPLE ug/l) /quarter	ED	WQ level/ limit (μg/l)	Е	(μ	ATES SAMPL g/l) quarter	ED	EPA MQL	BORATORY AN	VALYSIS Detection Level
	(2)	Date	Date	Date	Date	(2)	Date	Date	Date	Date	(µg/l)	Method Used	Achieved
						1					(1)	(1)	(μg/l)
Antimony	N/A					N/A					60		
Cadmium	54.15					126.52					0.5		
Copper	1000.00					431.63					0.5		
Lead	587.78					587.66					0.5		
Mercury	0.00098					0.39					.005		
Nickel	426.84					15071.86					0.5		
Selenium	85.37					137.76					5		
Silver	250.0					112.58					0.5		
Zinc	300.00					3461.17					20		
Chromium	1000.00					22680.2					10		
Cyanide	100.00					154.01					10		
Arsenic	71.14					4807.76					0.5		
Molybdenum	64.03					N/A							
Phenols	N/A					N/A					5		
Beryllium	100.00					173.41					0.5		
Thallium	N/A					N/A					0.5		
Flow, MGD	N/A					N/A					0.5		
CBOD5 (lbs/day)	6672.0					25 May-Oct 30 Nov-Apr							
TSS (lbs/day)	6672.0					5 May-Oct							
NH3-N (lbs/day)	835.0					5 May-Oct							
(3)													

- (1) It is advised that the influent and effluent samples are collected considering flow detention time through each plant. Analytical MQLs must be met for the effluent (and SHOULD be met for the influent) so the data can also be used for Local Limits assessment and NPDES application purposes.
- (2) This value was calculated during the development of TBLL based on State WQ criteria, EPA guidance and either ADEQ Pretreatment staff Excel spreadsheets or the Permittee's consultant with concurrence from Pretreatment staff. CBOD₅, TSS and NH3-N limits are in mg/l.
- (3) Record the name of any pollutant [40 CFR 122, Appendix D, Table II and/or Table V] detected and the concentration at which they were detected.

MAHL - Maximum Allowable Headworks Level / MAHC – Maximum Allowable Headworks Concentration For BOD₅, TSS & NH3-N, in each quarter show the maximum daily loading and the maximum daily effluent concentration.

WQ - "Water Quality Levels not to exceed" OR actual permit limit.

ATTACHMENT A

PRETREATMENT PROGRAM STATUS REPORT UPDATED SIGNIFICANT INDUSTRIAL USERS LIST

Industrial User Name	SIC/NAICS Code	40 CFR XXX	Cor Doc	ntrol ument	New User	Times Inspected	Times Sampled	Compli		e Status (N/A, C, NC, or SNC) Reports	Permit Limits (also denote those	
Name	Code	or N/A	Y/N	Last Action				BMR	90-day Compliance	Semi Annual	Self Monitoring	violated & number of times)
								_				
												_

Please footnote N/A reason

ATTACHMENT B SIGNIFICANT VIOLATIONS - ENFORCEMENT ACTIONS TAKEN

Industrial User	Nature Violat	e of cion		Numbe	r of Act	ion Taken		Penalties	Compliance Schedule		Current	Comments
Name	Reports	Limits	N.O.V.	A.O.	Civil	Criminal	Other	Collected	Date Issued	Date Due	Status	Commerces

ATTACHMENT C

PRETREATMENT PERFORMANCE SUMMARY (PPS)

NOTE: ALL QUESTIONS REFER TO THE INDUSTRIAL PRETREATMENT PROGRAM <u>AS APPROVED</u> BY ADEQ. THE PERMITTEE SHOULD NOT ANSWER THE QUESTIONS BASED ON CHANGES MADE TO THE APPROVED PROGRAM WITHOUT DEPARTMENT AUTHORIZATION.

I. <u>General Information</u>

Con	trol Authority Name	
Add:	ress	
Cit	y State/Zip	
Con	tact Person Position	
Con	tact Telephone NPDES Permit Nos	
Rep	orting Period	
	(Beginning Month and Year) (Ending	Month and Year)
Tota	al Number of Categorical IUs	=
Tota	al Number of Significant Noncategorical IUs	
Tota	al Number of Non-Significant (yet permitted) IUs	
	II. Significant Industrial User Complian	ice_
	SIGNIFICAN Categoric	NT INDUSTRIAL USERS al NonCategorical
1)	No. of SIUs Submitting BMRs/Total No. Required	N/A*
2)	No. of SIUs Submitting 90-Day Compliance Reports/No. Required /	N/A*
3)	No. of SIUs Submitting Semiannual Reports/ Total No. Required	/
4)	No. of SIUs Meeting Compliance Schedule/ Total No. Required to Meet Schedule/_	/
5)	No. of SIUs in Significant Noncompliance/ Total No. of SIUs /	/
6)	Rate of Significant Noncompliance for all SIUs (categorical and noncategorical)	_ /

III. Compliance Monitoring Program

			SIGNIFICANT I Categorical	NDUSTRIAL USERS NonCategorical
1)		Control Documents Issued/Total No. ed	/	/
2)	No. of	Nonsampling Inspections Conducted	/	/
3)	No. of	Sampling Visits Conducted		/
4)	No. of	Facilities Inspected (nonsampling) .		/
5)	No. of	Facilities Sampled	/	/
		IV. <u>Enforcement Act</u>	<u>ions</u>	
			SIGNIFICANT Categorical	INDUSTRIAL USERS NonCategorical
1)		Compliance Schedules Issued/No. edules Required	/	/
2)	No. of	Notices of Violations Issued to SIUs		
3)	No. of	Administrative Orders Issued to SIUs		
4)	No. of	Civil Suits Filed		
5)	No. of	Criminal Suits Filed		
6)		Significant Violators (attach per publication)		
7)		of Penalties (not surcharges) ed (total dollars/IUs assessed)	/_	/
8)	Other A	actions (sewer bans, etc.)		
	followi plete:	ng certification must be signed in o	rder for this	form to be considered
	ertify t my knowl	that the information contained herein edge.	is complete a	and accurate to the best
		Authorized Representative	Date _	

Pollutant	% Rem ⁷	Water Quality mg/l	Water Quality ¹ Ibs/day	Sludge mg/kg	Sludge ³	Inhibition ² mg/l	Inhibition ⁴ Ibs/day	MAHL lbs/day	MAHC mg/l	Domestic lbs/day	Allocation for %SF ⁵	MAIL ⁶ lbs/day	Max Inf Exceed	ec Max Effluent vs WQS(mg/l)
Cadmium Total	67	0.0018	0.055Ó	85	0.2558	1.00	9.85	0.0550	0.00558	0.0049	0.0495	0.0446	No	No
Copper Total	71	0.0092	0.3137	4300	12.2122	1.00	9.85	0.3137	0.03185	0.2564	0.2823	0.0259	0.0370	No
Lead Total	75	0.0027	0.1068	840	2.2584	1.00	9.85	0.1068	0.01084	0.0156	0.0961	0.0805	No	No
Mercury Total	60	0.00001	0.0003	57	0.1916	0.10	0.98	0.0003	0.00003	0.0029	0.0003	0.0000	No	No
Nickel Total	42	0.0970	1.6466	420	2.0164	1.00	9.85	1.6466	0.16718	0.0613	1.4820	1.4206	No	No
Selenium Total	50	0.0056	0.1099	100	0.4033	0.20	1.97	0.1099	0.01116	0.0489	0.0989	0.0501	No	No
Silver Total	75	0.0009	0.0368	0	0.0000	0.25	2.46	0.0368	0.00373	0.0049	0.0331	0.0282	No	No
Zinc Total	49	0.0855	1.6518	7500	30.8639	4.500	44.32	1.6518	0.16771	1.3798	1.4866	0.1068	0.1900	No
Chromium Total	82	0.2954	16.1660	3000	7.3772	1.00	9.85	7.3772	0.74899	0.0977	6.6395	6.5417	No	No
Cyanide Total	69	0.0058	0.1844	0	0.0000	0.23	2.27	0.1844	0.01872	0.0977	0.1659	0.0682	No	No
Arsenic	45	0.3490	6.2493	75	0.3361	0.10	0.985	0.3361	0.03412	0.0049	0.3025	0.2976	No	No
Molybdenum	50	0.0000	0.0000	75	0.3025	0.20	1.97	0.3025	0.03071	9774470.23	0.2722	0.0000	No	No
Beryllium	50	0.005915	0.1165	0	0.0000	0.10	0.98	0.1165	0.01183	9774470.23	0.1049	0.0000	No	No

3336.00

3336.00

417.00

20121108

See Note 9=>

See Note 10=>

See Note 11=>

Dry tons/day of sludge⁸

CBOD

NH3-N

TSS

1.0082 Saftey Factor

VNBN North

MAHC

¹ lbs/day = mg/l * 8.34 * average flow / (1-%Rem)

² Page 3-44 of EPA 833B87202 Be est @ 0.10 mg/l; Zinc (4.5 mg/l) and CN (0.23 mg/l) from Sept 06 Annual Report

³ lbs/day = (dry tons/day * 0.002 * critria(mg/kg))/ % Rem

⁴ lbs/day = mg/l * Flow * 8.34

⁵ lbs/day = (1 - SF) * MAHL

⁶ MAIL = Maximum allowable industrial loading = Allocation for % SF - Domestic

⁷ Rem Eff from Page 3-56 EPA 833B87202, Be & Mo est @ 50; Cu,Pb & Zn from "Rem" spreadsheet in this Workbook

⁸ Dry tons/day of sludge based on page 5 of checklist in Audit Report dated July 11, 2006.

⁹ The CBOD Peak Load (2798 lbs/day) occurred in June 2011; see TSS Peak Load worksheet. The Department elected to use a typical design load of 2 MGD X 200 mg/l X 8.34 = 3336 lbs/day.

¹⁰ The TSS Peak Load (2249 lbs/day) occurred in May 2011; the Department elected to use a typical design load of 3336 lbs/day.

¹¹ The NH3-N Peak Load (155.89 lbs/day) occurred in August 2011; the Department elected to use a typical design load of 2 MGD X 25 mg/l X 8.34 = 417 lbs/day.

				VNBN SC	outn	MAHL								
Pollutant	% Rem ⁷	Water Quality	Water Quality ¹	Sludge	Sludge ³	Inhibition ²	Inhibition ⁴	MAHL	MAHC	Domestic	Allocation for %SF	MAIL	Max Inf Exceed	ec Max Effluent
		mg/l	lbs/day	mg/kg	lbs/day	mg/l	lbs/day	lbs/day	mg/l	lbs/day	lbs/day ⁵	lbs/day	MAHC	vs WQS(mg/l)
Cadmium Total	67	0.1265	8.2818	85	1.17	1.00	21.60	1.17	0.05415	0.01	1.05	1.043	No	No
Copper Total	68	0.4316	29.1356	4300	58.30	1.00	21.60	21.60	1.00000	0.35	19.44	19.088	No	No
Lead Total	61	0.5877	32.5483	840	12.70	1.00	21.60	12.70	0.58778	0.08	11.43	11.349	No	No
Mercury Total	60	0.00039	0.0212	57	0.88	0.10	2.16	0.0212	0.00098	0.0032	0.02	0.016	No	No
Nickel Total	42	15.0719	561.3125	420	9.22	1.00	21.60	9.22	0.42684	0.10	8.30	8.202	No	No
Selenium Total	50	0.1378	5.9513	100	1.84	0.20	4.32	1.844	0.08537	0.03	1.66	1.628	No	No
Silver Total	75	0.1126	9.7273	0	0.00	0.25	5.40	5.40	0.25000	0.04	4.86	4.824	No	No
Zinc Total	69	3.4612	241.1720	7500	100.22	0.300	6.48	6.48	0.30000	2.80	5.83	3.027	No	No
Chromium Total	82	22.6802	2721.6997	3000	33.73	1.00	21.60	21.60	1.00000	0.16	19.44	19.280	No	No
Cyanide Total	69	0.1540	10.7315	0	0.00	0.10	2.16	2.16	0.10000	0.16	1.94	1.784	No	No
Arsenic	45	4.8078	188.8193	75	1.54	0.10	2.160	1.54	0.07114	0.02	1.38	1.361	No	No
Molybdenum	50	0.0000	0.0000	75	1.38	0.20	4.32	1.383	0.06403	0.01	1.24	1.237	No	No
Beryllium	50	0.173405	7.4913	0	0.00	0.10	2.16	2.16	0.10000	0.00	1.94	1.939	No	No
Phenols								?	<u> </u>	?				
503 Table I														
Molybdenum	50	0.0000	0.00	75		0.20							0.022	0.046
PCBs								?		?				
NPDES Permit														
CBOD5							Note 8: ==>	6672.0	Note 9: ==	3910.0	6004.8	2094.8		
TSS							Note 10 ==>		Note 9: ==	4600.0		1404.8		
NH3-N							Note 11 ==>		Note 11 ==	398.7		352.8		
TP							14010 11 ==>	2			701.0	002.0		
										?				
TK								?		?				
Dry tons/day of sl	udge ³	4.61	Saftey Factor	0.10]									
Notes:														

- 1. lbs/day = mg/l * 8.34 * average flow / (1-%Rem)
- 2. Inhibition Levels from Page 3-44 of EPA 833B87202 Be est @ 0.10 mg/l and Zinc Level from 04-19-2005 Inf analysis
- 3. lbs/day = (dry ton-sludge/day) * (2000 lbs-sludge/ton)*(lb-pollutant/10^6 lbs-sludge)/%Rem = (dry tons/day * 2000/10^6 * critria(mg/kg))/ % Rem; Dry tons/day of sludge based on page 3 of checklist in Audit Report dated July 11, 2006.
- 4. lbs/day = mg/l * Flow * 8.34
- 5. lbs/day = (1 SF) * MAHL
- 6. MAIL = Maximum allowable industrial loading = Allocation for % SF Domestic
- 7. Rem Eff from Page 3-56 EPA 833B87202. Be & Mo est @ 50: Cu,Pb & Zn from "Rem" spreadsheet in this Workbook
- 8. The Department elected to use the design loading instead of the actual current POTW's peak loading (5108 lbs/day) capacity for CBOD as shown on the Conventional Pollutants spreadsheet for the month of Dec 2011.
- The design loading is $4.0 \text{ MGD} \times 200 \text{ mg/l} \times 8.34 = 6672 \text{ lbs/day}$ which is greater than the actual peak loading (5108 lbs/day) for the past twelve months.
- The influent effluent data on the Conventional Pollutants sheet was provided to the Department (Torrence) in an email from the City (Redo) dated 5-30-2012.
- Other options are also available if the City elects to develop limits; please refer to page 5-22 in "EPA Local Limits Development Guidance; 833-R-04-002A"
- Since the City has not provided the Department with Domestic sampling for conventional pollutants, the Department elected to use the Ten States Standard BOD rate of 0.17 lb/day per capita (BOD is always equal to or greater than CBOD). The 2010 population of Van Buren was 23,000; therefore, the domestic load is 0.17 X 23,000 = 3910 lbs/day. The TSS domestic rate is 0.20 lb/day per capita (.2 X 23,000 = 4600 lbs/day).
- Reference: Recommend Standards for Wastewater Facilities 2004 Edition (Ten States Standards); Section 11.253.a

 10. The actual current peak loading for TSS removal is only 3504 lbs/day for the month Nov 2011. The Department elected to use the design loading
 - for TSS at 4.0 MGD X 200 mg/l X 8.34 = 6672 lbs/day. Refer to Hawkins-Weir Project #04251 dated 11/14/2007. The plant average only 266 lbs/day of TSS in the effluent; the allowable limit is 1000.8 lbs/day.
- 11. The Department elected to use the actual current maximum performance for NH3-N of 835 lbs/day (the design load is 4.0 MGD X 25 mg/l X 8.34 = 837 lbs/day) Note that during the month of Mar 2012 the effluent average 151 lbs/day of NH3-N. The South plant has no limit for March but the limit for May Oct is 166.8 lbs/day. Referring to "EPA Design of Wastewater Treatment Facilities Major Systems", find in Table 2-2. Typical Characteristics of Domestic Sewage the average value of NH3-N at 15 mg/l. During the month of Mar 2012 the average flow was 3.187 MGD. The average domestic loading for NH3-N is 3.187 MGD X 15 mg/l X 8.34 = 398.7 lbs/day.