

ARCADIS GERAGHTY & MILLER



Mr. Richard Boice
USEPA Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

ARCADIS Geraghty & Miller, Inc.
14497 North Dale Mabry Hwy.
Suite 115
Tampa
Florida 33618
Tel 813 961 1921
Fax 813 961 2599

Subject:

May 1999 Project Progress Report for the Verona Well Field (VWF), Paint Shop, and Annex

ENVIRONMENTAL

Dear Mr. Boice:

The following narrative constitutes a monthly progress report with respect to actions and activities undertaken on RD/RA activities associated with the Verona Well Field (VWF), Annex and Paint Shop. This report is submitted voluntarily to keep United States Environmental Protection Agency (USEPA) informed of the progress of RD/RA activities and is subject to, and without waiver of, respondents' prior written objections to the scope and legality of portions of the February 18 and May 5, 1992 §106 Administrative Orders.

Date:

10 June 1999

Contact:

Greg Rorech
Bridget Morello

Extension:

813 961 1921

Description of Work Completed

- 1) CETC completed system equipment, outfall, and water quality monitoring in accordance with the NPDES permit.
- 2) Pursuant to the April 29, 1999 VWFMP meeting, ARCADIS Geraghty & Miller directed the surveyor, Phil McPherson, to commence survey activities as agreed upon by the VWFMP technical committee. The survey work is anticipated to be completed before July 1, 1999.
- 3) Per prior voluntary agreement between the VWF Group and USEPA, ARCADIS Geraghty & Miller implemented the temporary flow increase at blocking wells V26, V27, and V28 on May 5, 1999, to help minimize the adverse affects of the City's increased production during the summer months. Wells V26 and V27 are yielding an extra 100 gpm each, and well V28 is yielding an extra ~60 gpm, for a combined total increase of ~260 gpm. These increased flow rates will be maintained through September 1999.
- 4) ARCADIS Geraghty & Miller received a letter from USEPA (dated May 13, 1999) of comments on the Final O&M Manual and the 1998 Annual Monitoring Report. The letter also included MDEQ's comments on the Final O&M Manual. Response letters were submitted to USEPA on June 1, 1999.

Our ref.:

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- 5) During the April 29, 1999 VWFMP meeting, USEPA provided ARCADIS Geraghty & Miller with a copy of a comment letter from MDEQ (dated April 8, 1999) regarding soil cleanup verification sampling issues. MDEQ's letter was prepared in response to ARCADIS Geraghty & Miller's February 4, 1999 letter regarding outstanding issues associated with the soil cleanup verification effort. ARCADIS submitted a letter to USEPA/MDEQ on May 28, 1999, in response to the MDEQ letter.
- 6) The VWFMP technical committee participated in a conference call on May 14, 1999 to discuss several issues stemming from the April 28-29, 1999 meetings. ARCADIS Geraghty & Miller prepared a conference call summary which was issued to the VWFMP committee on May 19, 1999, along with results of an additional modeling simulation, and letter outlining the level of effort involved with further simulations.
- 7) The VWFMP committee met on June 4, 1999 in Battle Creek, and meeting minutes were distributed by Mary Sclawy on June 8, 1999. The next VWFMP meeting is scheduled for August 25, 1999 in Battle Creek. However, key parties from each entity involved with the VWFMP will meet on June 18, 1999 to discuss long term issues.
- 8) CETC performed a packing replacement at the air stripper the week of May 17, 1999, as discussed under "Problems Encountered" below.
- 9) Layne Northern, under supervision by ARCADIS Geraghty & Miller, continued well maintenance activities at the new blocking wells and Annex recovery wells in May 1999. Wells GMBW-1 and 2 did not require chemical cleaning based upon results of specific capacity testing, but the pumps were pulled and inspected/cleaned the first week of May 1999. Layne completed chemical cleaning of Annex wells GMA-1D and GMA-2D the weeks of May 10 and 24, 1999, respectively. See "Problems Encountered" below for additional information on well maintenance.

Summary of All Findings

None.

Sampling Results/Reports

- 1) On May 17, 1999, CETC collected treatment system influent and effluent water samples in accordance with the NPDES permit. No permit exceedances occurred. Analytical results and operating data, summarized on the appropriate reporting forms by ARCADIS Geraghty & Miller, were submitted to the MDEQ SWQD on June 2, 1999.

- 2) Pursuant to USEPA's requests for additional flow data, the attached table summarizes the flow data for May 1999. City production well data for May 1999 also are attached. In May 1999, the City's average daily production rate was 13.65 mgd. In addition, the City estimates discharge of approximately 5.4 million gallons of wastewater into the iron/manganese removal system lagoons during May 1999 (i.e., approximately 175,000 gallons per day). This discharge volume is strictly an estimate because the City's effluent flow meter was not operating properly during May, and was repaired on May 18th.
- 3) During May 1999 the VWF RA operated at an average flow rate of 2485 gpm (calculation based on average of individual well flow rates from 5/3, 5/10, 5/17 and 5/31/99 shown on the attached table). The average monthly flow rate (calculated on the attached table) based on flow totalizer readings from 4/26 and 5/31/99 and the total number of minutes during that period, less 4.5 days of downtime during packing replacement, is 2581 gpm. This calculated rate does not reflect other downtime, if any, as discussed under "Problems Encountered" below.
- 4) The City's analytical results for samples collected in May 1999 are attached. Well V-15 in Bailey Park exhibited detections of chloroform and trihalomethanes. Well V-36 exhibited detections of 1,1-dichloroethane and cis-1,2-dichloroethene. All other samples had non-detectable concentrations. None of the detected concentrations exceeded the health limit MCL.

Contact Made With the Public

None.

Changes in Project Personnel

None.

Problems Encountered or Anticipated and Actions Taken to Address

- 1) On May 5, 1999, CETC was directed to increase the flow rate at original blocking wells V26, V27, and V28 by 100 gpm each, per prior voluntary agreement between USEPA and the VWF Group. CETC adjusted the flow control valves on each well. With the flow control valve wide open, well V28 is only yielding ~60 gpm of the desired 100 gpm. No action is currently scheduled to be taken to address this issue, as other voluntary contingency options are currently being evaluated by the VWFMP committee.
- 2) On May 10, 1999, well V22 shutdown due to motor failure. CETC replaced the motor on May 11, 1999 and restarted the well.

- 3) On May 17, 1999, CETC shutdown the VWF RA to perform a scheduled air stripper packing replacement. USEPA, MDEQ, and the City were notified of the planned shutdown earlier that month. The system was shutdown from 1:00 p.m. on May 17, 1999 through 11:00 p.m. on May 21, 1999. The spent packing was chipped into small pieces to minimize disposal volume, and then transported (as non-hazardous material) to the BFI C&C Landfill in Marshall, Michigan for disposal, i.e., the same location that received spent packing from the 1996 replacement event.
- 4) On May 16, 1999, several of the original blocking wells (V24-V27) were shutdown or experienced voltage fluctuation due to a problem with the City's power supply. The City corrected the problem and the wells were restarted. It is possible that such variations in voltage occur regularly and may be the source of recent, noted fluctuations in flow rates from the original blocking wells. CETC will further evaluate this phenomenon.
- 5) While the system was down for the packing replacement, CETC performed additional maintenance including: replacement of the check valve at GMBW-8, replacement of the ball valve and pipe connection at the wet/dry well, and routine blower inspection/greasing.
- 6) On May 28, 1999, the system shutdown due to a main fuse failure. CETC replaced the 400 amp fuse and restarted the system on May 29, 1999. The system was down for approximately 24 hours.
- 7) Well maintenance activities continued in May, as summarized below:
 - Well GMBW-1 was off-line from 9 a.m. May 3rd through 1 p.m. May 5th for pump inspection/cleaning.
 - Well GMBW-2 was off-line from 9 a.m. May 3rd through 11 a.m. May 5th for pump inspection/cleaning.
 - Well GMA-1D and GMA-2D were off-line from 10:30 a.m. May 10th through 1:45 p.m. June 2nd for testing and cleaning. (The week of May 17th the wells were down due to the system being shutdown for packing replacement.)

All scheduled well maintenance activities have been completed. The cleaning of well GMA-2D resulted in a significantly smaller increase in specific capacity than that for GMA-1D. While the well will produce the desired flow rate (50-55 gpm), it may be useful to perform a camera log and assess the extent of fractures in the wellbore to determine why there is such a variance in specific capacity at the two Annex wells. ARCADIS Geraghty & Miller will attempt to coordinate the camera logging with USGS or MDEQ during their upcoming activities in the well field as part of the VWFMP effort.

ARCADIS GERAGHTY & MILLER

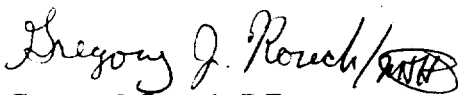
Work Anticipated in Following Month

CETC and ARCADIS Geraghty & Miller will continue monitoring the system in accordance with the GWAMP, NPDES permit, and air emissions SRD guidelines. ARCADIS Geraghty & Miller will VWFMP tasks such as well surveying and conversion of City wells V19, V21 and V29, and coordinate the July 1999 hydraulic and water quality monitoring events. In addition, ARCADIS Geraghty & Miller will participate in conference calls with other technical members of the VWFMP committee regarding outstanding issues from the June 4, 1999 meeting.

If you have questions or need additional information please do not hesitate to contact us.

Sincerely,
ARCADIS Geraghty & Miller, Inc.


Bridget S. Morello
Project Engineer


Gregory J. Rorech, P.E.
Principal Engineer

Attachments

Copies:

VWF Technical Committee
Beth O'Brien, MDEQ
Bill Davidson, Horizon
David Rich, City of Battle Creek
Ken Kohs, City of Battle Creek
Bruce Rasher, Consumers Power

Summary of Remedial Action Well Flow Rates and City Production Rates, Verona Well Field Superfund Site, Battle Creek, Michigan

Well Name	Design Flow gpm	Flow 5/3/99 gpm	Flow 5/10/99 gpm	Flow 5/17/99 gpm	Flow 5/24/99 gpm	Flow 5/31/99 gpm	Average Flow* gpm	Total Flow 4/26/99 gal	Total Flow 5/31/99 gal	Total Pumped May (gal)	Avg. Monthly Flow (gpm)**	Percent of Total Flow (%)	Percent of Design Flow (%)
V22	120	106	0	106	122	130	93	109537800	113745200	4207400	97	3.8	81.2
V24	120	122	123	0	130	138	103	92612200	97415900	4803700	111	4.3	92.7
V25	150	39	60	0	150	37	57	139379600	142071900	2692300	62	2.4	41.5
V26	165	171	262	0	260	263	191	150988900	159816500	8827600	204	7.9	123.8
V27	190	191	285	0	291	296	213	88662500	98276000	9613500	223	8.6	117.1
V28	190	185	232	94	235	233	196	172100700	180481700	8381000	194	7.5	102.1
GMBW-1	225	0	225	226	224	222	179	185945600	195078000	9132400	211	8.2	94.0
GMBW-2	220	0	221	220	223	219	177	182938800	191940300	9001500	208	8.1	94.7
GMBW-3	170	167	171	170	103	123	147	141030900	147834500	6803600	157	6.1	92.6
GMBW-4	160	166	160	160	160	162	162	131109300	138098600	6989300	162	6.3	101.1
GMBW-5	230	244	228	228	233	235	234	154011800	164093600	10081800	233	9.0	69.1
GMBW-6	230	242	231	231	230	231	233	189028800	199116000	10087200	234	9.0	101.5
GMBW-7	220	233	221	221	220	220	223	179236700	188870400	9633700	223	8.6	101.4
GMBW-8	220	236	222	222	222	221	225	8432000	16881400	8449400	196	7.6	88.9
GMA-1D	45	52	0	55	72	0	36	42959000	44471200	1512200	35	1.4	77.8
GMA-2D	45	45	0	45	0	0	18	41730300	42992200	1261900	29	1.1	64.9
TOTAL	2700	2199	2641	1978	2875	2730	2485	2009704900	2121183400	111478500	2581	-95%	
Original BW Avg. Rate (gpm):							852	Original BW Monthly Avg. Rate (gpm):			892	34.6	95.4
New BW Avg. Rate (gpm):							1579	New BW Monthly Avg. Rate (gpm):			1625	63.0	97.0
Annex Wells Avg. Rate (gpm):							54	Annex Wells Monthly Avg. Rate (gpm):			64	2.5	71.4
Avg. City Production Rate (mgd):							13.65						

Notes:

The two types of average flow rates listed above were calculated as follows:

- 1) The average of individual weekly well flow rates = Avg. Flow (gpm); and
- 2) The monthly average flow rate calculated by dividing the total flow pumped by the total number of minutes between flow readings = Avg. Monthly Flow (gpm).

City production rates calculated from data provided by City.

BW Blocking Well

NA not available

NM not measured

gal gallons

gpm gallons per minute

* Layne continued well maintenance on GMBW-1 and 2, and Annex wells GMA-1D and 2D during May 1999. Well V22 was down in early May to replace motor. System down for ~12 hours on 5/28-5/29/99 due to main fuse being blown. Power to V series wells was intermittent on 5/17 due to problems with city's power supply.

** Flow averaged over number of minutes between readings, does not account for system downtime (if any).

Entire system was down from 5/17-5/21/99 for air stripper packing replacement (total of 4.5 days down).

**FAX:**

From :

Number of Pages 6
(including this cover sheet)David L. Rich
City of Battle Creek
Verona Pumping Station
TX: 616-966-3494

FAX : 616-966-3614

To: Bridget MorelloFAX: 813-961-2599Company: Geraghty + Miller**MESSAGE :**

Requested information
A Copy of last months Operation Summary
A Copy of last months Well Operation
A Copy of the Filter Backwash Dates and
Estimated figure for discharge to Lagoons
A Copy of the current months Well Program
If you have any questions on this information,
Please contact me.

David L. Rich

CITY OF BATTLE CREEK

PUBLIC WORKS DEPARTMENT

WATER PRODUCTION DIVISION

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Record of Pumpage

Through Last Day of May, 1999

MONTH	MONTHLY DEMAND			MAXIMUM DAILY DEMAND		MINIMUM DAILY DEMAND	
	Verona	Lakeview	Total	Verona	Lakeview	Verona	Lakeview
JANUARY	360.23	0.00	360.23	13.47	0.00	8.48	0.00
FEBRUARY	327.57	0.00	327.57	12.77	0.00	9.61	0.00
MARCH	345.49	0.00	345.49	12.54	0.00	9.73	0.00
APRIL	354.69	0.00	354.69	14.14	0.00	8.57	0.00
MAY	423.21	0.00	423.21	15.90	0.00	10.74	0.00
JUNE			0.00				
JULY			0.00				
AUGUST			0.00				
SEPTEMBER			0.00				
OCTOBER			0.00				
NOVEMBER			0.00				
DECEMBER			0.00				
TOTALS	1811.19	0.00	1811.19	21.84 MG Record Day 7/31/97			
YEARLY	1999	1811.19	MAXIMUM	1999	Verona 19.60	Lakeview 0.00	
TOTALS	1998	1847.87	DAILY	1998	22.90	0.00	
TO DATE	1997	1730.92	RATE	1997	24.40	0.00	
				On Record:	Verona June 1959 26.70		
					Lakeview July 7, 1988 6.34		
AVERAGE	1999	362.24	MAXIMUM	1999	Verona 423.21	Lakeview 0.00	
MONTHLY	1998	369.57	MONTHLY	1998	511.50	0.00	
DEMAND	1997	346.18	DEMAND	1997	539.43	0.00	
TO DATE				On Record:	July-97 539.43	June-88 136.13	

All Values Expressed in Million Gallons

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CITY OF BATTLE CREEK

MONTHLY WELL PUMPAGE

WSSN 0450

5/99

Date	13 Hrs O/S	14 Hrs	15 Hrs	17 Hrs	30 Hrs O/S	36 Hrs	37 Hrs	38 Hrs	39 Hrs	40 Hrs	41 Hrs	42 Hrs	Total Hrs.
1		0	0	0		0	0	0	0	0	0	0	0
2		0	0	0		0	0	0	0	0	0	0	0
3		0	0	0		0	0	0	6	0	0	0	6
4		2	2	2		0	0	0	8	2	2	0	18
5		3	3	3		0	0	0	12	0	0	0	21
6		2	2	2		0	0	0	9	0	0	0	15
7		0	0	0		0	0	0	3	0	0	0	3
8		0	0	0		0	0	0	5	0	0	0	5
9		0	0	0		0	0	0	0	0	0	0	0
10		2	2	2		0	0	0	6	0	0	0	12
11		2	2	2		0	0	0	11	0	0	0	17
12		2	2	2		0	0	0	8	0	0	0	14
13		2	2	2		0	0	0	7	0	0	0	13
14		0	0	0		0	0	0	5	0	0	0	5
15		0	0	0		0	0	0	5	0	0	0	5
16		0	0	0		0	0	0	9	0	0	0	9
17		0	4	4		0	0	0	11	0	0	0	19
18		0	4	4		0	0	0	8	0	0	0	16
19		0	2	2		0	0	0	8	0	0	0	12
20		0	0	0		0	0	0	8	0	0	0	8
21		0	2	2		0	0	0	12	0	0	0	16
22		0	1	1		0	0	0	6	0	0	0	8
23		0	0	0		0	0	0	3	0	0	0	3
24		0	0	0		0	0	0	22	0	0	0	22
25		0	0	0		0	0	0	20	0	0	0	20
26		0	0	0		0	0	0	24	0	0	0	24
27		0	0	0		0	0	0	17	0	0	0	17
28		0	0	0		0	0	0	18	0	0	0	18
29		0	0	0		0	0	0	12	0	0	0	12
30		0	0	0		0	0	0	2	0	0	0	2
31		0	0	0		0	0	0	3	0	0	0	3
Total Hrs	0	15	28	28	0	0	0	0	268	2	2	0	343

CITY OF BATTLE CREEK

MONTHLY WELL PUMPAGE WSSN 0450 5/99

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Date	43 Hrs.	44 Hrs.	45 Hrs.	46 Hrs.	47 Hrs.	48 Hrs.	49 Hrs.	50 Hrs.	51 Hrs.	52 Hrs.	53 Hrs.	54 Hrs.	Total Hrs.
1	0	0	12	12	24	24	0	24	24	24	19	19	182
2	0	0	7	7	24	24	0	24	24	24	14	14	162
3	0	6	16	16	24	24	0	24	24	24	21	21	200
4	0	8	18	18	24	24	0	24	24	24	19	19	202
5	0	12	17	17	24	24	0	24	24	24	17	17	200
6	0	9	16	16	24	24	0	24	24	24	16	16	193
7	0	3	18	18	16	16	15	24	24	24	20	20	198
8	0	5	14	14	11	11	24	24	24	24	20	20	191
9	0	0	16	16	8	8	24	24	24	24	21	21	186
10	0	6	21	21	19	19	24	24	24	24	21	21	224
11	0	11	24	24	20	20	24	24	24	24	24	24	243
12	0	8	24	24	19	19	24	24	24	24	24	24	238
13	0	7	24	24	15	15	24	24	24	24	24	24	229
14	0	5	24	24	16	16	24	24	24	24	24	24	229
15	0	5	24	24	16	16	24	24	24	24	24	24	229
16	0	9	24	24	23	23	24	24	24	24	24	24	247
17	0	11	24	24	19	19	24	24	24	24	24	24	241
18	0	8	24	24	24	24	24	24	24	18	18	24	236
19	0	8	24	24	24	24	24	24	24	16	16	24	232
20	0	8	24	24	24	24	24	24	24	17	17	24	234
21	0	12	24	24	24	24	24	24	24	17	17	24	238
22	0	6	24	24	24	24	24	24	24	15	15	24	228
23	0	5	24	24	24	22	17	17	17	16	11	19	196
24	0	21	24	24	24	24	1	1	1	0	0	24	144
25	0	10	24	24	24	24	22	3	3	0	0	24	158
26	0	0	24	24	24	24	24	0	0	0	0	24	144
27	0	8	24	24	24	24	20	3	3	0	0	24	154
28	0	19	24	24	24	24	24	18	17	0	0	24	198
29	0	12	24	24	24	24	21	21	15	3	3	24	195
30	0	2	24	24	24	24	20	20	17	16	16	24	211
31	0	3	24	24	24	24	19	19	13	12	12	24	198
Total	0	227	659	659	662	660	543	630	614	538	481	687	6360

CITY OF BATTLE CREEK
VERONA WATER TREATMNT PLANT
FILTER RUN TIMES MAY 1999

Date	Filter No.	Backwash Time	Run Time Hours
05/01/99	F-7	08:30	191
05/02/99	F-4	07:01	191
05/03/99	F-8	08:18	192
05/04/99	F-1	08:22	192
05/05/99	F-5	08:05	192
05/06/99	F-2	08:16	192
05/07/99	F-6	07:05	191
05/08/99	F-3	None	
05/09/99	F-7	07:11	191
05/10/99	F-3	08:03	430
05/10/99	F-4	08:59	194
05/11/99	F-8	08:06	192
05/12/99	F-1	07:11	191
05/13/99	F-5	08:11	192
05/14/99	F-2	08:09	192
05/15/99	F-6	08:22	193
05/16/99	F-3	10:08	146
05/17/99	F-7	10:10	195
05/18/99	F-4	09:15	192
05/19/99	F-8	08:21	192
05/20/99	F-1	08:14	193
05/21/99	F-5	08:16	192
05/22/99	F-2	09:06	191
05/23/99	F-6	09:12	191
05/24/99	F-3	08:40	191
05/25/99	F-7	09:30	191
05/26/99	F-4	08:18	191
05/27/99	F-8	08:10	192
05/28/99	F-1	08:27	192
05/29/99	F-5	08:17	192
05/30/99	F-2	08:13	191
05/31/99	F-6	07:41	191

There were 31 filter backwashes for the month of May. At an estimated 175,000 gals. each for a total of 5,425,000 gals. discharged to the lagoons. None of this water was discharged to the river.

The Plant influent total was 423.56 M.Gals. The effluent Total was 423.21 M.Gals. This would make the difference lost to the lagoons 0.35 million gals. I believe this was caused by one of the effluent meters being out of calibration. It was repaired on 5-18-99.

Well Program 6-4-99

Step 1: 50 + 52

Step 2: 51 - 54

Step 3: 45, 46, 51 - 54

Step 4: 45 - 48, 51 - 54

Step 5: 45 - 54

Step 6: 39, 44 - 54

Step 7: 14 - 17, 39, 44 - 54

Step 8: 14 - 17, 39 - 41, 44 - 54

Step 9: 14 - 17, 39 - 54

Step 10: 14 - 17, 36 - 54



FAX:

From :

Number of Pages 11
(including this cover sheet)

David L. Rich
City of Battle Creek
Verona Pumping Station
TX: 616-966-3494

FAX : 616-966-3614

To: K. Kohs, B. Morello, B. O'Brien

FAX: 616-966-3621
813-961-2599
517-335-4887

Company: City, Arcadis & MDEQ

MESSAGE :

Here are the results from the latest Quarterly
wellfield VOC monitoring. If you have questions, please
feel free to contact me.

GR

Michigan Department of Environmental Quality

DWRP Laboratory Services - Drinking Water Lab

USEPA Region V Drinking Water Lab Cert. No. M100003

P.O. Box 30270, Lansing, MI 48909

TEL: 517/335-8184 FAX: 517/335-8562

Official Laboratory Report

Report To:

Verona Station
250 Brigden Drive
Battle Creek MI 49014

Sample Number: C1999030599
Customer Number: 73400100

System Name/Owner: Verona Station/ BATTLE CREEK
Collection Address: 250 Brigden Drive, Battle Creek 49014
Collected By: G LEWIS
Twp/Sec/Well #: 777/15
County: Calhoun
Collector: Public Water Supply Operator
Sample Kit #: 36VO
Chlorination: None

WSSN / Pool ID: 0450
Sampled: 05/18/1999 8:15:00AM
Received: 05/18/1999 10:55AM
Source: Type I
Purpose: Routine Monitoring
Water System: Public System Well
Sample Point: SAMPLE TAP
Site Code: G002

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	BENZENE	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	BROMOBENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOCHLOROMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	BROMOMETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, SEC-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, TERT-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	CARBON TETRACHLORIDE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROBENZENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	CHLORODIBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
0.0010 mg/L	CHLOROFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROMETHANE	05/20/1999		0.05 mg/L	CXVO 19960701
Not Detected	CHLOROTOLUENE (COMBINED)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMO-3-CHLOROPROPANE, 1,2-	05/20/1999		0.0025 mg/L	CXVO 19960701
Not Detected	DIBROMOETHANE, 1,2- (EDB)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,2-	05/20/1999	0.6 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,3-	05/20/1999		0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,4-	05/20/1999	0.075 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBUTANE, 1,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLORODIFLUOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701

Michigan Department of Environmental Quality
Collection Address: 250 Bridgen Drive, Battle Creek 49014

Official Laboratory Report
Sample Number: C1999030599

		Supplemental Information Related To Reported Result		
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit Test Code
Not Detected	DICHLOROETHANE,1,1-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	DICHLOROETHANE,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,1-	05/20/1999	0.007 mg/L	0.0005 mg/L CXVO 19960701
Trace	DICHLOROETHYLENE,1,2-CIS	05/20/1999	0.07 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-TRANS	05/20/1999	0.1 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	DICHLOROPROPANE,1,2-	05/20/1999	0.005 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	DICHLOROPROPANE,1,3-	05/20/1999		0.001 mg/L CXVO 19960701
Not Detected	DICHLOROPROPANE,2,2-	05/20/1999		0.001 mg/L CXVO 19960701
Not Detected	DICHLOROPROPENE,1,1-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-CIS	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-TRANS	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	ETHYLBENZENE	05/20/1999	0.7 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	FLUOROTRICHLOROMETHANE	05/20/1999		0.001 mg/L CXVO 19960701
Not Detected	HEXACHLOROBUTADIENE	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	HEXACHLOROETHANE	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	ISOPROPYL BENZENE	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	ISOPROPYL TOLUENE, PARA-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	METHYL ETHYL KETONE	05/20/1999		0.02 mg/L CXVO 19960701
Not Detected	METHYL ISOBUTYL KETONE	05/20/1999		0.02 mg/L CXVO 19960701
Not Detected	METHYL TERT-BUTYL ETHER	05/20/1999		0.001 mg/L CXVO 19960701
Not Detected	METHYLENE CHLORIDE	05/20/1999	0.005 mg/L	0.0006 mg/L CXVO 19960701
Not Detected	NAPHTHALENE	05/20/1999		0.001 mg/L CXVO 19960701
Not Detected	PROPYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	STYRENE	05/20/1999	0.1 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,1,2-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,2,2-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	TETRACHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	TETRAHYDROFURAN	05/20/1999		0.005 mg/L CXVO 19960701
Not Detected	TOLUENE	05/20/1999	1 mg/L	0.0005 mg/L CXVO 19960701
0.0010 mg/L	TOTAL TRIHALOMETHANES	05/20/1999	0.10 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,3-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,4-	05/20/1999	0.07 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,1-	05/20/1999	0.2 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	TRICHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L CXVO 19960701
Not Detected	TRICHLOROPROPANE,1,2,3-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,2,4-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,3,5-	05/20/1999		0.0005 mg/L CXVO 19960701
Not Detected	VINYL CHLORIDE	05/20/1999	0.002 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	XYLENE, ORTHO-	05/20/1999	10 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	XYLENE,META-&PARA-	05/20/1999	10 mg/L	0.0005 mg/L CXVO 19960701
Not Detected	XYLENES (TOTAL)	05/20/1999	10 mg/L	0.0005 mg/L CXVO 19960701

Laboratory Comments and Result Notes:

COMPOUNDS REPORTED AS TRACE WERE DETECTED AT LEVELS ABOVE THE DETECTION LIMITS, BUT AT LEVELS TOO LOW TO QUANTITATE.

Michigan Department of Environmental Quality

DWRP Laboratory Services - Drinking Water Lab

USEPA Region V Drinking Water Lab Cert. No. MI00003

P.O. Box 30270, Lansing, MI 48909

TEL: 517/335-8184 FAX: 517/335-8562

Official Laboratory Report

Report To:

Verona Station
250 Brigden Drive
Battle Creek MI 49014

Sample Number: C1999030603
Customer Number: 73400100

System Name/Owner: Verona / BATTLE CREEK
Collection Address: 250 Brigden Drive, Battle Creek 49014
Collected By: GLEWIS
Twp/Sec/Well #: ? / ? / 36
County: Calhoun
Collector: Public Water Supply Operator
Sample Kit #: 36VO
Chlorination: None

WSSN / Pool ID: 0450
Sampled: 05/18/1999 8:30:00AM
Received: 05/18/1999 10:55AM
Source: Type I
Purpose: Routine Monitoring
Water System: Public System Well
Sample Point: SAMPLE TAP
Site Code: G001

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	BENZENE	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	BROMOBENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOCHLOROMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	BROMOMETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, SEC-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, TERT-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	CARBON TETRACHLORIDE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROBENZENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	CHLORODIBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	CHLOROFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROMETHANE	05/20/1999		0.05 mg/L	CXVO 19960701
Not Detected	CHLOROTOLUENE (COMBINED)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMO-3-CHLOROPROPANE, 1,2-	05/20/1999		0.0025 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE 1,2- (EDB)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,2-	05/20/1999	0.6 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,3-	05/20/1999		0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,4-	05/20/1999	0.075 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBUTANE, 1,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLORODIFLUOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701

Michigan Department of Environmental Quality
Collection Address: 250 Brigden Drive, Battle Creek 49014

Official Laboratory Report
Sample Number: C1999030603

		Supplemental Information Related To Reported Result			
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
0.0005 mg/L	DICHLOROETHANE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHANE,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,1-	05/20/1999	0.007 mg/L	0.0005 mg/L	CXVO 19960701
0.0022 mg/L	DICHLOROETHYLENE,1,2-CIS	05/20/1999	0.07 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-TRANS	05/20/1999	0.1 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,2-	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,3-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,2,2-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-CIS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-TRANS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ETHYLBENZENE	05/20/1999	0.7 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	FLUOROTRICHLOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	HEXACHLOROBUTADIENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	HEXACHLOROETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL BENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL TOLUENE, PARA-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	METHYL ETHYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL ISOBUTYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL TERT-BUTYL ETHER	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	METHYLENE CHLORIDE	05/20/1999	0.005 mg/L	0.0006 mg/L	CXVO 19960701
Not Detected	NAPHTHALENE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	PROPYL BENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	STYRENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,1,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,2,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TETRAHYDROFURAN	05/20/1999		0.005 mg/L	CXVO 19960701
Not Detected	TOLUENE	05/20/1999	1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TOTAL TRIHALOMETHANES	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,4-	05/20/1999	0.07 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,1-	05/20/1999	0.2 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROPROPANE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,2,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,3,5-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	VINYL CHLORIDE	05/20/1999	0.002 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, ORTHO-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE,META-&PARA-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENES (TOTAL)	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701

Laboratory Comments and Result Notes: None

Michigan Department of Environmental Quality

DWRP Laboratory Services - Drinking Water Lab

USEPA Region V Drinking Water Lab Cert. No. MI00003

P.O. Box 30270, Lansing, MI 48909

TEL: 517/335-8184 FAX: 517/335-8562

Official Laboratory Report

Report To:

Verona Station
250 Brigden Drive
Battle Creek MI 49014

Sample Number: C1999030602

Customer Number: 73400100

System Name/Owner: VERONA / BATTLE CREEK
Collection Address: 250 Brigden Drive, Battle Creek 49014
Collected By: G LEWIS
Twp/Sec/Well #: ? / ? / 39
County: Calhoun
Collector: Public Water Supply Operator
Sample Kit #: 36V0
Chlorination: None

WSSN / Pool ID: 0450

Sampled: 05/18/1999 8:45:00AM

Received: 05/18/1999 10:55AM

Source: Type 1

Purpose: Routine Monitoring

Water System: Public System Well

Sample Point: SAMPLE TAP

Site Code: G003

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	BENZENE	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	BROMOBENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOCHLOROMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	BROMOMETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, SEC-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, TERT-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	CARBON TETRACHLORIDE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROBENZENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	CHLORODIBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	CHLOROFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROMETHANE	05/20/1999		0.05 mg/L	CXVO 19960701
Not Detected	CHLOROTOLUENE (COMBINED)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMO-3-CHLOROPROPANE, 1,2-	05/20/1999		0.0025 mg/L	CXVO 19960701
Not Detected	DIBROMOETHANE 1,2- (EDB)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,2-	05/20/1999	0.6 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,3-	05/20/1999		0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,4-	05/20/1999	0.075 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBUTANE, 1,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLORODIFLUOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701

Michigan Department of Environmental Quality
Collection Address: 250 Bridgen Drive, Battle Creek 49014

Official Laboratory Report
Sample Number: C1999030602

		Supplemental Information Related To Reported Result			
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	DICHLOROETHANE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHANE,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,1-	05/20/1999	0.007 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-CIS	05/20/1999	0.07 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-TRANS	05/20/1999	0.1 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,2-	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,3-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,2,2-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-CIS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-TRANS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ETHYLBENZENE	05/20/1999	0.7 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	FLUOROTRICHLOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	HEXACHLOROBUTADIENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	HEXACHLOROETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL BENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL TOLUENE, PARA-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	METHYL ETHYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL ISOBUTYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL TERT-BUTYL ETHER	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	METHYLENE CHLORIDE	05/20/1999	0.005 mg/L	0.0006 mg/L	CXVO 19960701
Not Detected	NAPHTHALENE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	PROPYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	STYRENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,1,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,2,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TETRAHYDROFURAN	05/20/1999		0.005 mg/L	CXVO 19960701
Not Detected	TOLUENE	05/20/1999	1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TOTAL TRIHALOMETHANES	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,4-	05/20/1999	0.07 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,1-	05/20/1999	0.2 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROPROPANE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,2,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,3,5-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	VINYL CHLORIDE	05/20/1999	0.002 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, ORTHO-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, META-& PARA-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENES (TOTAL)	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701

Laboratory Comments and Result Notes: None

Michigan Department of Environmental Quality

DWRP Laboratory Services - Drinking Water Lab

USEPA Region V Drinking Water Lab Cert. No. MI00003

P.O. Box 30270, Lansing, MI 48909

TEL: 517/335-8184 FAX: 517/335-8562

Official Laboratory Report

Report To:

Verona Station
250 Brigden Drive
Battle Creek MI 49014

Sample Number: C1999030601
Customer Number: 73400100

System Name/Owner: VERONA/ BATTLE CREEK
Collection Address: 250 Brigden Drive, Battle Creek 49014
Collected By: G LEWIS
Twp/Sec/Well #: ? / ? /40
County: Calhoun
Collector: Public Water Supply Operator
Sample Kit #: 36VO
Chlorination: None

WSSN / Pool ID: 0450
Sampled: 05/18/1999 9:00:00AM
Received: 05/18/1999 10:55AM
Source: Type I
Purpose: Routine Monitoring
Water System: Public System Well
Sample Point: SAMPLE TAP
Site Code: G004

		Supplemental Information Related To Reported Result			
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	BENZENE	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	BROMOBENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOCHLOROMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	BROMOMETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, SEC-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, TERT-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	CARBON TETRACHLORIDE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROBENZENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	CHLORODIBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	CHLOROFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROMETHANE	05/20/1999		0.05 mg/L	CXVO 19960701
Not Detected	CHLOROTOLUENE (COMBINED)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMO-3-CHLOROPROPANE, 1,2-	05/20/1999		0.0025 mg/L	CXVO 19960701
Not Detected	DIBROMOETHANE 1,2- (EDB)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,2-	05/20/1999	0.6 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,3-	05/20/1999		0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,4-	05/20/1999	0.075 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBUTANE, 1,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLORODIFLUOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701

Michigan Department of Environmental Quality
Collection Address: 250 Briden Drive, Battle Creek 49014

Official Laboratory Report
Sample Number: C1999030601

		Supplemental Information Related To Reported Result			
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	DICHLOROETHANE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHANE,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,1-	05/20/1999	0.007 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-CIS	05/20/1999	0.07 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE,1,2-TRANS	05/20/1999	0.1 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,2-	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,1,3-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE,2,2-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-CIS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE,1,3-TRANS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ETHYL BENZENE	05/20/1999	0.7 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	FLUOROTRICHLOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	HEXACHLOROBUTADIENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	HEXACHLOROETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL BENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL TOLUENE, PARA-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	METHYL ETHYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL ISOBUTYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL TERT-BUTYL ETHER	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	METHYLENE CHLORIDE	05/20/1999	0.005 mg/L	0.0006 mg/L	CXVO 19960701
Not Detected	NAPHTHALENE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	PROPYL BENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	STYRENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,1,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE,1,1,2,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TETRAHYDROFURAN	05/20/1999		0.005 mg/L	CXVO 19960701
Not Detected	TOLUENE	05/20/1999	1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TOTAL TRIHALOMETHANES	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE,1,2,4-	05/20/1999	0.07 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,1-	05/20/1999	0.2 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE,1,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROPROPANE,1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,2,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE,1,3,5-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	VINYL CHLORIDE	05/20/1999	0.002 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, ORTHO-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE,META-&PARA-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENES (TOTAL)	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701

Laboratory Comments and Result Notes: None

Michigan Department of Environmental Quality

DWRP Laboratory Services - Drinking Water Lab

USEPA Region V Drinking Water Lab Cert. No. M100003

P.O. Box 30270, Lansing, MI 48909

TEL: 517/335-8184 FAX: 517/335-8562

Official Laboratory Report

Report To:

Verona Station
250 Brigden Drive
Battle Creek MI 49014

Sample Number: C1999030604

Customer Number: 73400100

System Name/Owner: Verona/ BATTLE CREEK
Collection Address: 250 Brigden Drive, Battle Creek 49014
Collected By: G LEWIS
Twp/Sec/Well #: 2/2/51
County: Calhoun
Collector: Public Water Supply Operator
Sample Kit #: 36VO
Chlorination: None

WSSN / Pool ID: 0450

Sampled: 05/18/1999 9:15:00AM

Received: 05/18/1999 10:55AM

Source: Type I

Purpose: Routine Monitoring

Water System: Public System Well

Sample Point: SAMPLE TAP

Site Code: G005

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	BENZENE	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	BROMOBENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOCHLOROMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BROMOFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	BROMOMETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, SEC-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	BUTYLBENZENE, TERT-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	CARBON TETRACHLORIDE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROBENZENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	CHLORODIBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROETHANE	05/20/1999		0.020 mg/L	CXVO 19960701
Not Detected	CHLOROFORM	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	CHLOROMETHANE	05/20/1999		0.05 mg/L	CXVO 19960701
Not Detected	CHLOROTOLUENE (COMBINED)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMO-3-CHLOROPROPANE, 1,2-	05/20/1999		0.0025 mg/L	CXVO 19960701
Not Detected	DIBROMOETHANE 1,2- (EDB)	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DIBROMOMETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,2-	05/20/1999	0.6 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,3-	05/20/1999		0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBENZENE, 1,4-	05/20/1999	0.075 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBROMOMETHANE	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROBUTANE, 1,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLORODIFLUOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701

Michigan Department of Environmental Quality
Collection Address: 250 Brigden Drive, Battle Creek 49014

Official Laboratory Report
Sample Number: C1999030604

		Supplemental Information Related To Reported Result			
Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
Not Detected	DICHLOROETHANE, 1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHANE, 1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE, 1,1-	05/20/1999	0.007 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE, 1,2-CIS	05/20/1999	0.07 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROETHYLENE, 1,2-TRANS	05/20/1999	0.1 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE, 1,2-	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE, 1,3-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPANE, 2,2-	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE, 1,1-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE, 1,3-CIS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	DICHLOROPROPENE, 1,3-TRANS	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ETHYLBENZENE	05/20/1999	0.7 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	FLUOROTRICHLOROMETHANE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	HEXACHLOROBUTADIENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	HEXACHLOROETHANE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL BENZENE	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	ISOPROPYL TOLUENE, PARA-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	METHYL ETHYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL ISOBUTYL KETONE	05/20/1999		0.02 mg/L	CXVO 19960701
Not Detected	METHYL TERT-BUTYL ETHER	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	METHYLENE CHLORIDE	05/20/1999	0.005 mg/L	0.0006 mg/L	CXVO 19960701
Not Detected	NAPHTHALENE	05/20/1999		0.001 mg/L	CXVO 19960701
Not Detected	PROPYLBENZENE, NORMAL-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	STYRENE	05/20/1999	0.1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE, 1,1,1,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHANE, 1,1,2,2-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TETRACHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TETRAHYDROFURAN	05/20/1999		0.005 mg/L	CXVO 19960701
Not Detected	TOLUENE	05/20/1999	1 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TOTAL TRIHALOMETHANES	05/20/1999	0.10 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE, 1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROBENZENE, 1,2,4-	05/20/1999	0.07 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE, 1,1,1-	05/20/1999	0.2 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHANE, 1,1,2-	05/20/1999	0.005 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	TRICHLOROETHYLENE	05/20/1999	0.005 mg/L	0.0004 mg/L	CXVO 19960701
Not Detected	TRICHLOROPROPANE, 1,2,3-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE, 1,2,4-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	TRIMETHYLBENZENE, 1,3,5-	05/20/1999		0.0005 mg/L	CXVO 19960701
Not Detected	VINYL CHLORIDE	05/20/1999	0.002 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, ORTHO-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENE, META-& PARA-	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701
Not Detected	XYLENES (TOTAL)	05/20/1999	10 mg/L	0.0005 mg/L	CXVO 19960701

Laboratory Comments and Result Notes: None