



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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July 28, 2008

File Ref: 3310  
PWSID #:113022470

Mr. Larry Nelson, Interim Utility Manager  
Madison Water Utility  
119 E. Olin Avenue  
Madison, WI 53713

**Subject: 2008 DNR Sanitary Survey Report**

Dear Mr. Nelson:

The purpose of a sanitary survey is to evaluate the system's source, facilities, equipment, operation, maintenance, and management as they relate to providing safe drinking water. The sanitary survey is also an opportunity to update the Department's records, provide technical assistance, and identify potential risks that may adversely affect drinking water quality.

On 07/15/2008, Tom Stunkard conducted a sanitary survey of your water system, Madison Water Utility. During the sanitary survey Chuck Engelhart, Al Larson, Dan Rodefled, Joe Grande & Joe DeMorett were present. At the completion of the survey, they were briefed on the preliminary findings. This report outlines the final findings, discusses problems that need to be addressed, and timelines for corrective action where appropriate.

A plan for corrective action, including a work schedule or completion of corrective action for all deficiencies identified below, must be completed within 60 days of the receipt of this letter, or September 28, 2008. Failure to submit the corrective action plan or complete the corrective action within 60 days will result in enforcement action. Depending on the type of corrective action you employ, you may need to obtain prior approval and submit plans to the Department.

**System Summary**

The Madison water system consists of a complex network of wells, storage reservoirs, elevated tanks, boosted water pressure zones, chemical addition consisting of chlorine and fluoride addition and a large water distribution system. The Water Utility owns 23 municipal wells, of which 17 are operated routinely and the other 6 are seasonal wells (operated when water demands are high). Several of the Madison wells have detectable levels of volatile organic chemicals (VOCs) present in the water. Because of the presence of the VOCs in these wells, the Water Utility is required to sample the wells quarterly to monitor the contaminant levels.

In addition to serving water to Madison consumers, the Water Utility also sells water to the Village of Shorewood Hills, the Village of Maple Bluff, Waunona Sanitary District #2 and the Rimrock Road Neighborhood water system. A connection also exists between the City of Madison and Mendota Mental Health Institution. The connection serves as the backup system for the Institution.

Since the last survey was conducted in 2002, the Madison Water Utility has made many changes in the water system. The most notable ones are as follows:

### **WELLS THAT HAVE BEEN ABANDONED:**

- ◆ Well no. 3, located at 212 N. First Street was abandoned on April 4, 2008.
- ◆ Well no, 5, located at 1522 Moorland road was abandoned on July 11, 2006.

### **NEW FACILITIES ADDED TO THE SYSTEM SINCE THE LAST SURVEY:**

- ◆ Well no. 29 was constructed on October 30, 2003 and put into service in July of 2005. The well is located on the east side of the City at 829 N. Thompson Drive.
- ◆ Well no. 30 was constructed on March 1, 2003 and put into service in June of 2006. The well is located on the south side of the City at 1133 Moorland Road.
- ◆ The Felland Road Reservoir was constructed in 2007 and has the storage capacity of 6 MG. This tank is located on the east-northeast side of the City's main pressure zone and was put into service last fall.

### **IMPROVEMENTS MADE IN THE SYSTEM SINCE LAST SURVEY**

- ◆ Security items have been installed at all of the wells, reservoirs and elevated storage tanks.
- ◆ Chlorine analyzers installed at all wells.
- ◆ Bunker Hill Reservoir (#115) was painted 2001
- ◆ Standpipe at well no. 9 was painted in 2002
- ◆ Fluoride Injection points have been relocated to the bottom portion of the discharge piping at wells 8, 9 & 19.
- ◆ Doors have been changed to open to the exterior at wells 8, 10 & 14.
- ◆ Utility has started to develop WHPPs of all of the municipal wells in City.
- ◆ The Utility does an excellent job of maintaining their pump houses in a neat and sanitary condition and they are encouraged to continue to maintain these facilities as they have done so in the past.

### **WATER QUALITY ISSUES:**

- ◆ The Madison Water Utility continues to perform the required monitoring to comply with the Safe Drinking Water Act. All of the required samples have been collected to date and those results have been submitted to the DNR.
- ◆ As part of the Lead and Copper Rule promulgated by the Federal Environmental Protection Agency, the City of Madison is required to perform monitoring in the distribution system for lead and copper. Since the City exceeded the action limits for lead, a program to address the lead problem has been established and is being conducted to eliminate lead service line present in the distribution system. This program continues to be implemented to replace lead service lines owned by the Utility and also for those found at residential homes in the City of Madison. This program should be completed in January 2011.
- ◆ There are still a number of City wells where volatile organic compounds (VOC) have been detected and these wells are being monitored on a quarterly basis. To date, none of the samples collected at these wells have exceeded any of the VOC standards.
- ◆ The City as a result of numerous complaints about water quality throughout the system conducted a study at well no. 29. Well no. 29 has been found to have some of the highest manganese concentrations of all of the Madison wells. The study was done to investigate whether filtration equipment could adequately remove the manganese from the water prior to it being pumped into the distribution system. The study indicated that filtration will work and therefore the City is in the process of submitting plans and specifications to the DNR for the addition of a filtration plant at well no. 29.

**Deficiencies**

During the course of the sanitary survey, 6 deficiencies were identified. Deficiencies are problems in the drinking water system that has the potential to cause serious health risks or represent long-term health risks to consumers. These deficiencies may indicate noncompliance with one or more Wisconsin Administrative Codes. Corrective action should be completed for these deficiencies as soon as possible.

Deficiency	Compliance Due Date	Code Citation
1. The paint on the outside of tank #126 & #120 was found to be in poor condition and there were areas where corrosion was present.	1 year	811.58(15)
2. Buried suction lines from reservoirs are not under a continuous pressure head, which is higher than the elevation of the ground surface at all times.	When improvements are made at these wells	811.38
3. The Utility should continue to replace under sized mains.	Yearly	811.63(4)
4. Separate chlorine rooms, which are gas tight, should be installed at wells 6, 7, 8, 9, 10, 11, 12, 13, and 23, whenever major repairs are made at these facilities. This is required to prevent injury to personnel and to prevent costly repairs to the equipment housed in these pump house facilities.	When improvements are made at these wells	811.44(5)
5. Water storage facilities are not inspected at least once every 5 years.	Every 5 years	811.08(5)
6. Electrical equipment shall be installed above ground except in cases where determined unnecessary by the Department to meet the other requirements in this chapter.	When improvements are made at this well	811.73(5)

**Discussion and Schedule for Correction of Deficiencies:**

1. I was informed that the elevated storage tank at well no. 26, referred to as #126, will be painted this coming fall and the elevated storage tank at well #20, referred to as #120, will be painted in the spring of 2009. In anticipation of this upcoming maintenance, please remember that in accordance with s. NR 811.07(3), Wis. Adm. Code, you are required to have two safe bacti samples, collected 24 hours apart prior to bringing any storage system back on line. In addition, Department approval is required prior to this work. Please send the name of the interior paint and disinfection method to: Larry Landsness, DNR - Bureau of Drinking Water and Groundwater, P.O. Box 7921, Madison, WI 53707-7921
2. At well station no. 11 and 13, the pump discharge piping is buried between the respective well and reservoir. Plans for upgrading these facilities, to maintain a positive pressure at all times on the buried sections of piping, should be submitted to this Department for approval when major repairs are made at these well house facilities.
3. It was noted that there is 195,760' of water main in the distribution system that is less than 6" in diameter. The Water Utility has done an excellent job replacing smaller diameter mains when work is done in areas of the distribution system where they exist. The Department encourages the Water Utility to continue to replace these small diameter main whenever practical in order to improve fire flows and overall system hydraulics. Please continue with the excellent program in the future.
4. All water storage facilities must be drained and inspected at least once every five years and maintenance provided as necessary. The following elevated storage tanks, according to our records, are due to be inspected in 2008, Tanks #315, 126, 113, 120 & 225. Please make sure an inspection is conducted at this facility in the next 12 months.
5. When major renovation are made at any of the wells where there is not a separate chemical room installed, the Water Utility should include in the plans a separate chemical room at those wells. The wells where these improvements are needed are at wells 6, 7, 8, 9, 10, 11, 12, 13 & 23.

6. The booster pump and the electrical equipment located in the basement of well no. 7 should be relocated to an above ground location.

During the course of the sanitary survey, 6 recommendations were identified. Recommendations are problems in the water system that hinder your public water system from consistently providing safe drinking water to consumers.

<b>Recommendation</b>
1. An adequate wellhead protection program has not been designed and implemented including a water conservation plan.
2. The Water Utility is encouraged to continue implementing a comprehensive Cross-Connection Control Program.
3. The Water Utility needs to continue to implementing a comprehensive Private Well Abandonment/Permitting Program.
4. The operators are encouraged to could to maintain their certification with the appropriate grade of certification
5. The operators should continue the hydrant and valve-exercising program.
6. The source capacity is not adequate to meet current and future demand.

**Discussion of Recommendations:**

1. The City is encouraged to continue to implement a wellhead protection program (WHPP) for all their existing municipal wells. A program of this nature can help protect the recharge areas of the municipals wells thereby protecting them against possible contamination. For all new municipal wells that are drilled in Wisconsin, it is required that all municipalities adopt a Wellhead Protection ordinance and implement a WHPP. Since it makes good sense to protect all municipal wells, I would strongly recommend this be done for those well, which have no WHPP to date.
2. The Water Utility has done an excellent job with the enforcement of the City’s cross connection control program as it relates to commercial and industrial facilities. However, in addition to the existing program, the Water Utility needs to also start inspecting residential homes for cross connections. Inspections at residential homes should be conducted when water meters are replaced. Please see that such a program is started in the near future and that individual records are kept for each inspection conducted.
3. There are still a number of private wells that exist within the City’s service area that must be addressed. Any unused, unsafe or improperly constructed well must be permanently abandoned unless the owner has applied for and received a well operational permit from the City. Please continue to enforce this important program to protect the groundwater aquifers against contamination.
4. The Water Utility is encouraged to continue to support their operators to ensure they have the proper training and certification to operate the water system. All operators must have the Groundwater and Distribution certification. Once the new filtration plant is installed at well no. 29, the operators will also need to be certified in Filtration (I subclass).
5. Hydrants are being flushed each year and valves located in the distribution system are exercised each year. A valve and hydrant maintenance program is required and helps guarantee that all valves and hydrants are in good working order when needed, especially during an emergency. In addition to the valve and hydrant maintenance program, records must be kept on each hydrant and valve listing pertinent information about the equipment and should also show when and what work was last done to this equipment. These records have been kept up-to-date and are available for Department review. The Water Utility has done an excellent job in the implementation of the valve and hydrant maintenance program and they are encouraged to keep up the good work.

6. The Water Utility is encouraged to continue to investigate the need for more source capacity. As the City continues to grow in population, it is strongly recommended to continue the planning process for additional wells for the City. Pumpage figures indicate an increase in well operating hours to a point where a new well(s) will be necessary to meet the daily demand of the system. Therefore, the addition of more wells to the water system should be pursued.

### Water Quality Monitoring and Reporting

Overall, the Madison Water Utility has done an excellent job collecting water samples and reporting the results to the DNR to comply with the Safe Drinking Water Act (SDWA) monitoring requirements. All of the SDWA monitoring has been completed to date and concentrations detected in those water samples were all below the SDWA standards. However, it should be noted that wells no. 9, 11, 15, 18 & 28 have been tested quarterly for many years now due to several Volatile Organic Chemicals that have been detected at these wells.

### Required Reports, Records, and Utility Programs

Utility employees continue to implement a yearly hydrant and valve maintenance program to ensure that all hydrants and valves in the distribution system are in good working order. Any work that is performed on a hydrant or a valve is recorded and kept in a record keeping maintenance file for future reference. A yearly cross connection control program is also being conducted by the waterworks operators, which consists of individual inspections at commercial and industrial facilities within the City to look for and eliminate potential cross connections. In addition to the existing program, the Water Utility needs to also start inspecting residential homes for cross connections. Inspections at residential homes should be conducted when water meters are replaced. Please see that such a program is started in the near future and that individual records are kept for each inspection conducted at residential homes.

### Certified Operator

<u>Name</u>	<u>License #</u>	<u>Subclasses</u>	<u>License expires</u>	<u>Operator in charge</u>
Thomas Arneson	34383	T- G&D	5/1/2011	
Mark Ertel	32612	T- G&D	5/1/2010	
Joseph Grande	34375	T- G&D	5/1/2011	
Joel Guderyon	32547	G1 -G& D, T – IVZ	5/1/2010	
Alan Larson	34427	T - GI	5/1/2011	
David Lynch	34384	T- G&D	5/1/2011	
Theresa Peters	32122	T- G&D	5/1/2011	
Rene Puzach	31784	G1 – G&D	5/1/2010	
Karmjit Singh	32206	G1 – G&D, T – VIZ	11/1/2008	

### Key

T – Operator in Training, G1 – Certified operator

G – Groundwater subclass, D – Distribution subclass, V – Air stripping subclass, I – Iron removal Subclass  
& Z - Zeolite softening subclass.

### Water System Security

The operators are encouraged to take appropriate precautionary measures to insure that the integrity of each water system is not compromised. Operators should make daily security inspections at all waterworks facilities. Access to all wells, reservoirs and other facilities associated with the waterworks system must remain locked. For safety and security reasons, only authorized personnel should be allowed access to pump and chemical rooms.

### System Summary Information

A water system summary is attached. Please review for accuracy. If there are changes that need to be made, contact Thomas B. Stunkard at (608) 275-3300.

**Capacity Development Evaluation**

This sanitary survey serves as an evaluation of the capabilities of your water system. This system has been determined to have adequate technical, managerial, and financial capacity to provide safe drinking water. The ability to plan for, achieve, and maintain compliance with applicable drinking water standards has been demonstrated.

The next sanitary survey of your system is scheduled to take place in 2011. You will be contacted prior to the survey to schedule a date that is convenient for you.

**Required Action**

Please respond within 60 days of receipt of this letter or by September 28, 2008 with notification that all deficiencies have been corrected, or a plan for correcting the deficiencies identified above.

Thank you for your assistance during the sanitary survey. If you have any questions, you can reach me by phone at (608) 275-3300 or by postal mail at the address on this letterhead.

Sincerely,



Thomas B. Stunkard, P.E.  
Public Water Supply Engineer  
Telephone (608) 275-3300

- cc: Bureau of Drinking Water/Groundwater - DG/5  
Chuck Engelhart, Maintenance Superintendent, 110 S. Paterson Street, Madison, WI 53703  
Al Larson, Principal Engineer, 119 E. Olin Avenue, Madison, WI 53713  
Joe Grande, Water Quality Manager, 119 E. Olin Avenue, Madison, WI 53713  
Joe DeMorett, Water Supply Manager, 119 E. Olin Avenue, Madison, WI 53713  
Dan Rodefeld, Operations Manager, 119 E. Olin Avenue, Madison, WI 53713

**Water System Summary Information**

System ID: 11302247

System Name: MADISON WATER UTILITY

County: Dane

Type: Municipal Community

Basin:

Population: 200814

Service Connections: 0

Owner: NELSON, LARRY

119 E OLIN

MADISON, WI 53713

(608) 267-4227 Fax: (608) 266-4644

lnelson@ci.madison.wi.us

Date Security VA Complete:

Date ERP Complete:

Date ERP Last Exercised/Updated:

Emergency Phone: (608) 267-4227

Emergency Fax: (608) 266-4644

Emergency E-mail: lnelson@ci.madison.wi.us

**Affiliations**

Name	Affiliation	Start Date	End Date	Primary?	Phone
GRANDE, JOSEPH - WATER QUALITY MGR	SAMPLER	10/02/2006		Y	608-266-4654
NELSON, LARRY	PLAN CON	11/23/2007		Y	608-267-4227
NELSON, LARRY	OWNER	11/23/2007		Y	608-267-4227
NELSON, LARRY	EMERGENCY	11/23/2007		Y	608-267-4227
STUNKARD, TOM	DNR REP	08/18/1997		Y	608-275-3300

**Entry Points and Sources of Water (Basic Data)**

Source ID	Name	WUWN	Status	Type	Source	Depth	Cased	Grouted
1	WELL HAS BEEN PERMANENTLY ABANDONED	BF501	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	840		
2	WELL HAS BEEN PERMANENTLY ABANDONED	BF502	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	745		
3	WELL HAS BEEN PERMANENTLY ABANDONED	BF503	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	753	148	147.9
4	WELL HAS BEEN PERMANENTLY ABANDONED	BF504	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	737		
5	WELL HAS BEEN PERMANENTLY ABANDONED	BF505	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	828	226.5	
6		BF506	Active	ENTRY PT/SOURCE	Ground Water Source	751	220.54	220.54
7		BF507	Active	ENTRY PT/SOURCE	Ground Water Source	737	237.6	237.6
8		BF508	Active	ENTRY PT/SOURCE	Ground Water Source	774	280	280
9		BF509	Active	ENTRY PT/SOURCE	Ground Water	843	200	200

Source ID	Name	WUWN	Status	Type	Source	Depth	Cased	Grouted
					Source			
10		BF510	Temporarily Out of Service	ENTRY PT/SOURCE	Ground Water Source	1000	270	270
11		BF511	Active	ENTRY PT/SOURCE	Ground Water Source	752	110.67	110.67
12		BF512	Active	ENTRY PT/SOURCE	Ground Water Source	986	260	260
13		BF513	Active	ENTRY PT/SOURCE	Ground Water Source	775	128	128
14		BF514	Active	ENTRY PT/SOURCE	Ground Water Source	715	117.45	117.45
15		BF515	Active	ENTRY PT/SOURCE	Ground Water Source	753	172	172
16		BF516	Active	ENTRY PT/SOURCE	Ground Water Source	1005	300	300
17		BF517	Active	ENTRY PT/SOURCE	Ground Water Source	802	200.6	200.6
18		BF518	Active	ENTRY PT/SOURCE	Ground Water Source	808	251	251
19		BF519	Active	ENTRY PT/SOURCE	Ground Water Source	718	260	260
20		BF520	Active	ENTRY PT/SOURCE	Ground Water Source	1131	415	415
22		BF521	Perm Abandoned	ENTRY PT/SOURCE	Ground Water Source	457	151	151
23		BF522	Active	ENTRY PT/SOURCE	Ground Water Source	500	104	102
24		BF523	Active	ENTRY PT/SOURCE	Ground Water Source	729	235	235
25		BF524	Active	ENTRY PT/SOURCE	Ground Water Source	820	300	300
26		BF567	Active	ENTRY PT/SOURCE	Ground Water Source	1188	449.5	1175
27		AX011	Active	ENTRY PT/SOURCE	Ground Water Source	744	246	246
28		LK016	Active	ENTRY PT/SOURCE	Ground Water Source	882	400	400

Source ID	Name	WUWN	Status	Type	Source	Depth	Cased	Grouted
29		RG653	Active	ENTRY PT/SOURCE	Ground Water Source	815	342	342
30		RG700	Active	ENTRY PT/SOURCE	Ground Water Source	800	312	312

## Entry Points and Sources of Water (Misc. Data)

Source ID	PLSS	Lat./Long.	Pump Cap.	Pump Type	Lube	Aux. Power?
1	T7, R9E, S28, Q-NE QQ-NE	43.05877N x 89.42627W	-	Well Abandoned		Unknown
2	T7, R9E, S23, Q-SW QQ-SW	43.06173N x 89.39985W	-	Well Abandoned		Unknown
3	T7, R10E, S6, Q-SW QQ-SW	43.09373N x 89.36187W	-	Well Abandoned		Unknown
4	T7, R9E, S22, Q-SW QQ-NW	43.06600N x 89.42125W	-	Well Abandoned		Unknown
5	T7, R10E, S30, Q-SW QQ-SE	43.03370N x 89.35748W	-	Well Abandoned		Unknown
6	T7, R9E, S21, Q-NW QQ-NE	43.07380N x 89.43600W	2200	Vertical Turbine	Water	Unknown
7	T8, R10E, S31, Q-NW QQ-NW	43.11846N x 89.36339W	2250	Vertical Turbine	Water	Unknown
8	T7, R10E, S5, Q-SW QQ-SE	43.09095N x 89.33842W	1800	Vertical Turbine	Water	Unknown
9	T7, R10E, S16, Q-NE QQ-SW	43.07183N x 89.31553W	1700	Vertical Turbine	Water	Unknown
10	T7, R9E, S32, Q-SE QQ-NE	43.03751N x 89.44763W	2200	Vertical Turbine	Water	Unknown
11	T7, R10E, S4, Q-SW QQ-NE	43.09565N x 89.31669W	2300	Vertical Turbine	Water	Unknown
12	T7, R9E, S30, Q-SE QQ-SW	43.04674N x 89.47293W	2400	Vertical Turbine	Water	Unknown
13	T8, R9E, S25, Q-NW QQ-NE	43.14809N x 89.37522W	2300	Vertical Turbine	Water	Yes
14	T7, R9E, S18, Q-SE QQ-SW	43.07795N x 89.46954W	2400	Vertical Turbine	Water	Yes
15	T8, R10E, S28, Q-SW QQ-SE	43.12165N x 89.31914W	2200	Vertical Turbine	Water	Yes
16	T7, R8E, S24, Q-SW QQ-SW	43.06123N x 89.49786W	2400	Vertical Turbine	Water	Yes
17	T7, R9E, S13, Q-SW QQ-SE	43.07524N x 89.37708W	2300	Vertical Turbine	Water	Unknown
18	T7, R9E, S35, Q-NE QQ-NW	43.04472N x 89.39370W	2200	Vertical Turbine	Water	Yes
19	T7, R9E, S16, Q-NE QQ-NW	43.08938N x 89.43309W	2175	Vertical Turbine	Water	Yes
20	T6, R8E, S1, Q-SE QQ-NE	43.02116N x 89.48854W	2000	Vertical Turbine	Water	Yes
22	T7, R10E, S21, Q-NE QQ-NW	43.06203N x 89.31323W	-	Well Abandoned	Water	Unknown
23	T7, R10E, S10, Q-SW QQ-NW	43.08081N x 89.30625W	1200	Vertical Turbine	Water	Unknown
24	T7, R9E, S13, Q-NW QQ-SE	43.08281N x 89.37616W	2100	Vertical Turbine	Water	Yes
25	T7, R10E, S11, Q-NW QQ-SW	43.08749N x 89.28652W	2200	Vertical Turbine	Water	Yes
26	T7, R8E, S35, Q-NW QQ-NW	43.04570N x 89.51829W	2200	Vertical Turbine	Water	Unknown
27	T7, R9E, S22, Q-NE QQ-SW	43.06837N x 89.40926W	2200	Vertical Turbine	Water	Yes
28	T7, R8E, S15, Q-SE QQ-SE	43.07525N x 89.52638W	2200	Vertical Turbine	Water	Unknown
29	T8, R10E, S34, Q-SE QQ-SW	43.10979N x 89.29592W	2200	Vertical Turbine	Water	Unknown
30	T7, R9E, S36, Q-SE QQ-SE	43.03275N x 89.36544W	2200	Vertical Turbine	Water	Yes

## Storage

ID/Location	Type	Vol. (gal)	Firm Pumping Capacity (gpm)	Height to Overflow (ft.)	Overflow Elev. (sea-level, ft.)	Aux. Power?
@ well #6	GROUND STORAGE	155000	2100			NO
@ well #7	GROUND STORAGE	160000	2150			NO
@ well #8	GROUND STORAGE	140000	1550			NO
4724 Spaanem Ave @ well #9	STANDPIPE	3000000		1046.6		NO
@ well #10	GROUND STORAGE	100000	1675			NO

ID/Location	Type	Vol. (gal)	Firm Pumping Capacity (gpm)	Height to Overflow (ft.)	Overflow Elev. (sea-level, ft.)	Aux. Power?
@ well #11	GROUND STORAGE	150000	1750			NO
@ well #12	GROUND STORAGE	150000	2500			NO
@ well #13	GROUND STORAGE	150000	2300			YES
@ well #14	GROUND STORAGE	150000	2400			YES
@ well #15	GROUND STORAGE	150000	2400			YES
@ well #16	GROUND STORAGE	275000	2100			YES
@ well #17	GROUND STORAGE	370000	2100			NO
@ well #18-attached to well house	GROUND STORAGE	475000	2400			YES
@ well #19	GROUND STORAGE	3000000	2100			YES
Prairie Road @ well #20	GROUND STORAGE	4200000	1100			YES
4502 Leo Drive	GROUND STORAGE	100000	1200			NO
@ well #24	GROUND STORAGE	4000000	3000			YES
@ well #25	GROUND STORAGE	325000				YES
@ well #26	GROUND STORAGE	4000000	2000			NO
@ well #27	GROUND STORAGE	400000	2100			YES
@ well #28	GROUND STORAGE	330000	2100			NO
@ well #29	GROUND STORAGE	360000	2200			NO
@ well #30	GROUND STORAGE	414000	2200			YES
Lakeview at 1212 Northport Drive (#113)	ELEVATED TANK	55000				Unknown
Glenway & Zwerg Street #106 high service reservoir	GROUND STORAGE	6000000	1500	1054.85		Unknown
4701 Bunker Hill Lane #115	STANDPIPE	300000		1026.5		Unknown
Prairie Road	ELEVATED TANK	100000		1245		Unknown
behind John Lancaster Ford-referred to as tank #315	ELEVATED TANK	500000		1140		Unknown
@ well #26	ELEVATED TANK	250000		1320		Unknown
E of I-90, S of Milwaukee St & N of Cottage Grove Road	ELEVATED TANK	500000		1140		Unknown

**Booster Stations**

ID/Location	Type	Firm Pumping Capacity (gpm)	Aux. Power?
Lakeview Booster Station #113	ABOVE GROUND	500	No
E.L. Nordness Booster Station, 4701 Bunker Hill Lane	ABOVE GROUND	2100	Yes

ID/Location	Type	Firm Pumping Capacity (gpm)	Aux. Power?
3718 High Crossing Road	ABOVE GROUND	990	No
Richmond Hills Booster Station	ABOVE GROUND	1000	No
N of Waterside Drive & W Hidden Cave Road	ABOVE GROUND	500	Yes

## System Interconnects

ID/Location	Type	Capacity (gpm)	Metered?	Chemical Injection Capable?
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None

## Treatment Summary Data

Source ID	Type	Description	Begin	End	Objective(s)	Pump Model	Cap.	Stroke %	Speed %	Sol. Tank Cap.	Dil. Ratio
1	380	Fluoridation	01/01/1960	11/30/1987	Other						
2	380	Fluoridation	01/01/1960	11/23/1992	Other						
3	380	Fluoridation	01/01/1960		Other						
3	421	Hypochlorination, Post	01/01/1960		Disinfection						
4	380	Fluoridation	01/01/1960	11/01/1992	Other						
5	380	Fluoridation	01/01/1960		Other						
5	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	12	150	0
6	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	30	165	0
6	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	50	-	4	150	0
7	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	25	165	0
7	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	12	150	0
8	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	20	165	0
8	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	100	-	40	150	0
9	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	25	165	0
9	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	12	150	0
10	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	27	165	0
10	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	10	150	0
11	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	28	165	0
11	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	9.5	150	0
12	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	34	165	0
12	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	10	150	0
13	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	24	165	0
13	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	14.5	150	0
14	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	30	165	0
14	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	11	150	0
15	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	20	165	0
15	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	10	150	0
16	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	31	165	0
16	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	13	150	0

Source ID	Type	Description	Begin	End	Objective(s)	Pump Model	Cap.	Stroke %	Speed %	Sol. Tank Cap.	Dil. Ratio
		Post									
17	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	27	165	0
17	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	100	-	61	150	0
18	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	18	165	0
18	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	13	150	0
19	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	30	165	0
19	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	50	-	38	150	0
20	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	22	165	0
20	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	9	150	0
23	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	9	165	0
23	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	10	150	0
24	380	Fluoridation	01/01/1960		Other	Pulsatron	44	92	25	165	0
24	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	50	-	23	150	0
25	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	26	165	0
25	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	12	150	0
26	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	27	165	0
26	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	50	-	20	150	0
27	380	Fluoridation	01/01/1960		Other	Pulsatron	44	100	22	165	0
27	421	Hypochlorination, Post	01/01/1960		Disinfection	Regal	25	-	10	150	0
28	380	Fluoridation	07/08/2002		Other	Pulsatron	44	100	23	165	0
28	421	Hypochlorination, Post	07/08/2002		Disinfection	Regal	25	-	18	150	0
29	380	Fluoridation	04/01/2006		Other	Pulsatron	44	100	39	165	0
29	421	Hypochlorination, Post	04/01/2006		Disinfection	Regal	100	-	20	150	0
30	380	Fluoridation	08/04/2006		Other	Pulsatron	44	100	39	165	0
30	401	Gaseous Chlorination, Post	08/04/2006		Disinfection	Regal	50	-	30	150	0

## System Evaluation Summary

Inspector/Reviewer	Date	Report Date	Type	Agency	Response Due	Response Recd
STUNKARD, TOM	07/10/2008		SURVEY	DNR		
STUNKARD, TOM	07/23/2007	08/02/2007	ANNUAL	DNR		
STUNKARD, TOM	07/20/2006	08/01/2006	ANNUAL	DNR		
STUNKARD, TOM	07/25/2005	08/11/2005	ANNUAL	DNR		
STUNKARD, TOM	07/22/2004	08/09/2004	ANNUAL	DNR		
STUNKARD, TOM	07/16/2003	08/28/2003	SURVEY	DNR		
STUNKARD, TOM	07/23/2002	07/31/2002	ANNUAL	DNR		
STUNKARD, TOM	08/29/2001	09/17/2001	ANNUAL	DNR		
STUNKARD, TOM	08/23/2000	08/29/2000	ANNUAL	DNR		
STUNKARD, TOM	07/22/1999	08/16/1999	ANNUAL	DNR		
STUNKARD, TOM	07/28/1998	08/07/1998	ANNUAL	DNR		
STUNKARD, TOM	08/12/1997	09/24/1997	SURVEY	DNR		

Inspector/Reviewer	Date	Report Date	Type	Agency	Response Due	Response Recd
STUNKARD, TOM	07/17/1996	07/24/1996	ANNUAL	DNR		
STUNKARD, TOM	08/04/1995	08/09/1995	ANNUAL	DNR		
STUNKARD, TOM	07/19/1994	07/22/1994	ANNUAL	DNR		
STUNKARD, TOM	07/07/1993	07/20/1993	ANNUAL	DNR		
	09/01/1992		SURVEY	DNR		

**Bacteriological Sampling History**

Year	Distribution Safe	Distribution Unsafe	Confirmed Unsafe	Missed Samples	Raw Safe	Raw Unsafe
2008	1481			0	50	1
2007	2648	1		0	102	
2006	2428		2	0	93	
2005	2567	2		0	82	2
2004	2621	2		0	85	
2003	2636	1		0	71	
2002	2631	2		0	84	

**Chemical Sampling History**

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2008	FLUORIDE		6	0	0
2008	RAD	7	0	1	0
2008	RAD	19	0	1	0
2008	RAD	23	0	1	0
2008	RAD	27	0	1	0
2008	RAD	28	0	1	0
2008	VOC	9	2	0	0
2008	VOC	11	1	0	0
2008	VOC	15	2	0	0
2008	VOC	18	2	0	0
2008	VOC	23	1	0	0
2008	VOC	25	1	0	0
2008	VOC	28	2	0	0
2008	VOC	29	1	0	0
2008	VOC	30	1	0	0
2008	VOC		3	0	0
2007	FLUORIDE		12	0	0
2007	HAA5		7	0	0
2007	IOC	6	1	0	0
2007	IOC	7	1	0	0
2007	IOC	8	1	0	0
2007	IOC	9	1	0	0
2007	IOC	10	1	0	0
2007	IOC	11	1	0	0
2007	IOC	12	1	0	0
2007	IOC	13	1	0	0
2007	IOC	14	1	0	0
2007	IOC	15	1	0	0
2007	IOC	16	1	0	0
2007	IOC	17	1	0	0
2007	IOC	18	1	0	0
2007	IOC	19	1	0	0
2007	IOC	20	2	0	0
2007	IOC	23	1	0	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2007	IOC	24	1	0	0
2007	IOC	25	1	0	0
2007	IOC	26	1	0	0
2007	IOC	27	1	0	0
2007	IOC	28	1	0	0
2007	IOC	29	2	0	0
2007	IOC	30	1	0	0
2007	IOC		1	0	0
2007	NITRATE	6	1	0	0
2007	NITRATE	7	1	0	0
2007	NITRATE	8	1	0	0
2007	NITRATE	9	1	0	0
2007	NITRATE	10	1	0	0
2007	NITRATE	11	1	0	0
2007	NITRATE	12	1	0	0
2007	NITRATE	13	1	0	0
2007	NITRATE	14	1	0	0
2007	NITRATE	15	1	0	0
2007	NITRATE	16	1	0	0
2007	NITRATE	17	1	0	0
2007	NITRATE	18	1	0	0
2007	NITRATE	19	1	0	0
2007	NITRATE	20	1	0	0
2007	NITRATE	23	1	0	0
2007	NITRATE	24	1	0	0
2007	NITRATE	25	1	0	0
2007	NITRATE	26	1	0	0
2007	NITRATE	27	1	0	0
2007	NITRATE	28	1	0	0
2007	NITRATE	29	1	0	0
2007	NITRATE	30	1	0	0
2007	TTHM		7	0	0
2007	VOC	6	1	0	0
2007	VOC	7	1	0	0
2007	VOC	8	1	0	0
2007	VOC	9	4	0	0
2007	VOC	10	1	0	0
2007	VOC	11	1	0	0
2007	VOC	12	1	0	0
2007	VOC	13	1	0	0
2007	VOC	14	1	0	0
2007	VOC	15	4	0	0
2007	VOC	16	1	0	0
2007	VOC	17	1	0	0
2007	VOC	18	4	0	0
2007	VOC	19	1	0	0
2007	VOC	20	2	0	0
2007	VOC	23	1	0	0
2007	VOC	24	1	0	0
2007	VOC	25	1	0	0
2007	VOC	26	1	0	0
2007	VOC	27	1	0	0
2007	VOC	28	3	1	0
2007	VOC	29	1	2	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2007	VOC	30	4	0	0
2007	VOC		3	0	0
2006	FLUORIDE		12	0	0
2006	HAA5		7	0	0
2006	IOC	18	3	0	0
2006	NITRATE	3	1	0	0
2006	NITRATE	6	1	0	0
2006	NITRATE	7	1	0	0
2006	NITRATE	8	1	0	0
2006	NITRATE	9	1	0	0
2006	NITRATE	10	1	0	0
2006	NITRATE	11	1	0	0
2006	NITRATE	12	1	0	0
2006	NITRATE	13	1	0	0
2006	NITRATE	14	1	0	0
2006	NITRATE	15	1	0	0
2006	NITRATE	16	1	0	0
2006	NITRATE	17	1	0	0
2006	NITRATE	18	1	0	0
2006	NITRATE	19	1	0	0
2006	NITRATE	20	1	0	0
2006	NITRATE	23	1	0	0
2006	NITRATE	24	1	0	0
2006	NITRATE	25	1	0	0
2006	NITRATE	26	1	0	0
2006	NITRATE	27	1	0	0
2006	NITRATE	28	1	0	0
2006	NITRATE	29	1	0	0
2006	NITRATE	30	2	0	0
2006	TTHM		7	0	0
2006	VOC	3	3	0	0
2006	VOC	6	1	0	0
2006	VOC	9	4	0	0
2006	VOC	11	1	0	0
2006	VOC	14	1	0	0
2006	VOC	15	4	0	0
2006	VOC	17	1	0	0
2006	VOC	18	4	0	0
2006	VOC	23	1	0	0
2006	VOC	28	2	0	0
2006	VOC	29	2	0	0
2006	VOC	30	1	0	0
2005	FLUORIDE		12	0	0
2005	HAA5		7	0	0
2005	IOC	3	2	0	0
2005	IOC	5	2	0	0
2005	IOC	6	3	0	0
2005	IOC	7	2	0	0
2005	IOC	8	2	0	0
2005	IOC	9	2	0	0
2005	IOC	11	2	0	0
2005	IOC	12	2	0	0
2005	IOC	13	2	0	0
2005	IOC	14	2	0	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2005	IOC	15	2	0	0
2005	IOC	16	2	0	0
2005	IOC	17	2	0	0
2005	IOC	18	2	0	0
2005	IOC	19	2	0	0
2005	IOC	20	2	0	0
2005	IOC	23	2	0	0
2005	IOC	24	2	0	0
2005	IOC	25	2	0	0
2005	IOC	26	2	0	0
2005	IOC	27	3	0	0
2005	IOC	28	2	0	0
2005	IOC		7	0	0
2005	SOC	3	4	0	0
2005	SOC	5	2	0	0
2005	SOC	6	1	0	0
2005	SOC	7	1	0	0
2005	SOC	8	1	0	0
2005	SOC	9	2	0	0
2005	SOC	11	1	0	0
2005	SOC	13	1	0	0
2005	SOC	14	2	0	0
2005	SOC	16	1	0	0
2005	SOC	17	2	0	0
2005	SOC	18	1	0	0
2005	SOC	23	1	0	0
2005	SOC	24	1	0	0
2005	SOC	27	1	0	0
2005	SOC	28	1	0	0
2005	TTHM		7	0	0
2005	VOC	3	4	1	0
2005	VOC	5	1	0	0
2005	VOC	6	1	0	0
2005	VOC	7	1	0	0
2005	VOC	8	1	0	0
2005	VOC	9	4	0	0
2005	VOC	11	1	0	0
2005	VOC	12	1	0	0
2005	VOC	13	1	0	0
2005	VOC	14	1	0	0
2005	VOC	15	4	0	0
2005	VOC	16	1	0	0
2005	VOC	17	1	0	0
2005	VOC	18	4	0	0
2005	VOC	19	1	0	0
2005	VOC	20	1	0	0
2005	VOC	23	1	0	0
2005	VOC	24	1	0	0
2005	VOC	25	1	0	0
2005	VOC	26	1	0	0
2005	VOC	27	1	0	0
2005	VOC	28	1	0	0
2005	VOC		4	0	0
2004	FLUORIDE		11	2	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2004	HAA5		28	0	0
2004	IOC	29	3	0	0
2004	NITRATE	3	1	0	0
2004	NITRATE	5	1	0	0
2004	NITRATE	6	1	0	0
2004	NITRATE	7	1	0	0
2004	NITRATE	8	1	0	0
2004	NITRATE	9	1	0	0
2004	NITRATE	10	1	0	0
2004	NITRATE	11	1	0	0
2004	NITRATE	12	1	0	0
2004	NITRATE	13	1	0	0
2004	NITRATE	14	1	0	0
2004	NITRATE	15	1	0	0
2004	NITRATE	16	1	0	0
2004	NITRATE	17	1	0	0
2004	NITRATE	18	1	0	0
2004	NITRATE	19	1	0	0
2004	NITRATE	20	1	0	0
2004	NITRATE	23	1	0	0
2004	NITRATE	24	1	0	0
2004	NITRATE	25	1	0	0
2004	NITRATE	26	1	0	0
2004	NITRATE	27	1	0	0
2004	NITRATE	28	1	0	0
2004	TTHM		7	0	0
2004	VOC	3	4	0	0
2004	VOC	5	1	0	0
2004	VOC	6	1	0	0
2004	VOC	7	1	0	0
2004	VOC	8	1	0	0
2004	VOC	9	4	0	0
2004	VOC	10	1	0	0
2004	VOC	11	1	0	0
2004	VOC	12	1	0	0
2004	VOC	13	1	0	0
2004	VOC	14	1	0	0
2004	VOC	15	4	0	0
2004	VOC	16	1	0	0
2004	VOC	17	1	0	0
2004	VOC	18	4	0	0
2004	VOC	19	1	0	0
2004	VOC	20	1	0	0
2004	VOC	23	1	0	0
2004	VOC	24	1	0	0
2004	VOC	25	1	0	0
2004	VOC	26	1	0	0
2004	VOC	27	1	0	0
2004	VOC	28	4	0	0
2004	VOC	29	3	0	0
2004	VOC		21	0	0
2003	FLUORIDE		13	0	0
2003	IOC	3	1	0	0
2003	IOC	5	1	0	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2003	IOC	6	1	0	0
2003	IOC	7	1	0	0
2003	IOC	8	1	0	0
2003	IOC	9	1	0	0
2003	IOC	10	1	0	0
2003	IOC	11	1	0	0
2003	IOC	12	1	0	0
2003	IOC	13	1	0	0
2003	IOC	14	1	0	0
2003	IOC	15	1	0	0
2003	IOC	16	1	0	0
2003	IOC	17	1	0	0
2003	IOC	18	1	0	0
2003	IOC	19	1	0	0
2003	IOC	20	1	0	0
2003	IOC	23	1	0	0
2003	IOC	24	1	0	0
2003	IOC	25	1	0	0
2003	IOC	26	1	0	0
2003	IOC	27	1	0	0
2003	IOC	28	1	0	0
2003	IOC		1	0	0
2003	NITRATE	3	1	0	0
2003	NITRATE	5	1	0	0
2003	NITRATE	6	1	0	0
2003	NITRATE	7	1	0	0
2003	NITRATE	8	1	0	0
2003	NITRATE	9	1	0	0
2003	NITRATE	10	1	0	0
2003	NITRATE	11	1	0	0
2003	NITRATE	12	1	0	0
2003	NITRATE	13	1	0	0
2003	NITRATE	14	1	0	0
2003	NITRATE	15	1	0	0
2003	NITRATE	16	1	0	0
2003	NITRATE	17	1	0	0
2003	NITRATE	18	1	0	0
2003	NITRATE	19	1	0	0
2003	NITRATE	20	1	0	0
2003	NITRATE	23	1	0	0
2003	NITRATE	24	1	0	0
2003	NITRATE	25	1	0	0
2003	NITRATE	26	1	0	0
2003	NITRATE	27	1	0	0
2003	NITRATE	28	1	0	0
2003	VOC	3	4	0	0
2003	VOC	5	1	0	0
2003	VOC	6	1	0	0
2003	VOC	7	1	0	0
2003	VOC	8	1	0	0
2003	VOC	9	4	0	0
2003	VOC	10	1	0	0
2003	VOC	11	1	0	0
2003	VOC	12	1	0	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2003	VOC	13	1	0	0
2003	VOC	14	3	0	0
2003	VOC	15	4	0	0
2003	VOC	16	1	0	0
2003	VOC	17	1	0	0
2003	VOC	18	4	0	0
2003	VOC	19	1	0	0
2003	VOC	20	1	0	0
2003	VOC	23	1	0	0
2003	VOC	24	1	0	0
2003	VOC	25	1	0	0
2003	VOC	26	1	0	0
2003	VOC	27	1	0	0
2003	VOC	28	4	0	0
2003	VOC		1	0	0
2002	FLUORIDE		12	0	0
2002	IOC	3	3	0	0
2002	IOC	5	3	0	0
2002	IOC	6	3	0	0
2002	IOC	7	3	0	0
2002	IOC	8	3	0	0
2002	IOC	9	3	0	0
2002	IOC	10	3	0	0
2002	IOC	11	3	0	0
2002	IOC	12	3	0	0
2002	IOC	13	3	0	0
2002	IOC	14	3	0	0
2002	IOC	15	3	0	0
2002	IOC	16	3	0	0
2002	IOC	17	3	0	0
2002	IOC	18	3	0	0
2002	IOC	19	3	0	0
2002	IOC	20	3	0	0
2002	IOC	23	3	0	0
2002	IOC	24	3	0	0
2002	IOC	25	3	0	0
2002	IOC	26	3	0	0
2002	IOC	27	3	0	0
2002	IOC	28	1	0	0
2002	NITRATE	22	1	0	0
2002	RAD	7	1	0	0
2002	RAD	19	1	0	0
2002	RAD	25	1	0	0
2002	RAD	27	1	0	0
2002	RAD	28	1	0	0
2002	SOC	3	1	0	0
2002	SOC	5	1	0	0
2002	SOC	6	1	0	0
2002	SOC	7	1	0	0
2002	SOC	8	1	0	0
2002	SOC	9	1	0	0
2002	SOC	10	1	0	0
2002	SOC	11	1	0	0
2002	SOC	12	1	0	0

Year	Sample Group	Source ID	Samples Taken	Missed Samples	MCL Violations
2002	SOC	13	1	0	0
2002	SOC	14	1	0	0
2002	SOC	15	1	0	0
2002	SOC	16	1	0	0
2002	SOC	17	1	0	0
2002	SOC	18	1	0	0
2002	SOC	19	1	0	0
2002	SOC	20	1	0	0
2002	SOC	23	1	0	0
2002	SOC	24	1	0	0
2002	SOC	25	1	0	0
2002	SOC	26	1	0	0
2002	SOC	27	1	0	0
2002	SOC	28	1	0	0
2002	VOC	3	3	0	0
2002	VOC	5	1	0	0
2002	VOC	6	1	0	0
2002	VOC	7	1	0	0
2002	VOC	8	1	0	0
2002	VOC	9	3	1	0
2002	VOC	10	1	0	0
2002	VOC	11	1	0	0
2002	VOC	12	1	0	0
2002	VOC	13	1	0	0
2002	VOC	14	1	0	0
2002	VOC	15	4	0	0
2002	VOC	16	1	0	0
2002	VOC	17	1	0	0
2002	VOC	18	4	0	0
2002	VOC	19	1	0	0
2002	VOC	20	1	0	0
2002	VOC	23	1	0	0
2002	VOC	24	1	0	0
2002	VOC	25	1	0	0
2002	VOC	26	1	0	0
2002	VOC	27	1	0	0
2002	VOC	28	2	0	0
2002	VOC		1	0	0

Sample Group	Last Sampled
BACTI	2008
FLUORIDE	2008
HAA5	2007
IOC	2007
NITRATE	2007
PBCU	1997
RAD	2002
SOC	2005
TTHM	2007
VOC	2008
WQP	1997

**MCL Violations**

Source ID	Contaminant	Concentration	MCL	Units	Viol. Start	Viol. End
None						

**Definitions**

MCL = Maximum Contaminant Limit (as set by the Environmental Protection Agency (EPA))

BACTI = Bacteriological Sample

IOC = Sample for Inorganic Compounds

NITRATE = Nitrate Sample

PBCU = Lead and Copper Sample

RAD = Sample for Radioactivity

SOC = Sample for Synthetic Organic Compounds

VOC = Sample for Volatile Organic Compounds

FLUORIDE = Fluoride from Fluoridation

TTHM = Total Trihalomethane Sample

