

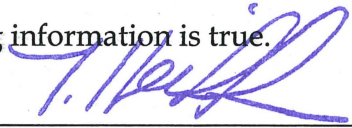
Internal Monitoring Report

Policy #: O-2B Water Quality

Monitoring Frequency: Quarterly

Date: April 24, 2012

I certify that the following information is true.

Signed  _____, General Manager

Policy Language:

Madison Water Utility consumers will receive high quality water that meets or is better than all primary and secondary drinking water standards, including their public notification requirements, and complies with board-adopted water quality goals, incorporated by attachment.

The Madison Water Utility recognizes that drinking water standards are subject to revision and that new compounds of concern will be determined. This dynamic is a result of health studies being conducted by health organizations and government agencies on the state, national and international level. The technology to quantify compounds at increasingly minute levels is constantly improving.

The Madison Water Utility shall maintain and promulgate a Watch List of compounds of concern by unit well of compounds that are increasing and may approach the primary and secondary drinking water standards. The Watch List shall identify which wells require action.

General Manager's interpretation and its justification:

Few things are more vital to a community than the availability of high quality drinking water. It promotes public health, public safety, and the economic interests of our community. To that end, the water utility will consistently deliver water that meets the primary, health-based drinking water standards, the secondary (aesthetic) standards, and the additional policy goals established by the Board. The Water Utility Procedural Guideline GUIDE 3, which establishes policies regarding iron and manganese, contains the following:

The Madison Water Utility, under normal operating conditions, shall provide water that contains less than the National Secondary Drinking Water Standard for Fe (currently 0.3 mg/L) and Mn (currently 0.05 mg/L) at the customer's tap.

I interpret this to mean that 95th percentile results from our routine distribution water quality monitoring program shall be less than these values for iron and manganese.

Utility staff will remain vigilant in following developments related to currently unregulated and emerging contaminants like pharmaceuticals, endocrine disruptors,

and chromium-6 that may pose problems in the future. Furthermore, the utility will employ multiple methods to adequately inform its consumers of the safety and quality of their drinking water including the federally-required Consumer Confidence Report (CCR), the water utility website, e-mail distribution lists, neighborhood listservs, citizen meetings, and through staff contact in the field and office.

Data directly addressing the General Manager’s interpretation:

Primary Drinking Water Contaminants:

There were no coliform-positive samples collected during the period from January through March. Wisconsin Administrative Code NR 809 requires that the utility collect 150 monthly distribution samples and not more than 5% of the samples test positive for coliform bacteria.

Well 19 is currently monitored twice per quarter due to an elevated level of radium observed in July 2011. The latest readings of 2.9 pCi/L (December) and 1.9 pCi/L (January) are below the MCL, which is 5 pCi/L. Samples were also collected in March and April but results are not yet available.

Five wells (9, 11, 14, 15, and 18) are currently tested quarterly for volatile organic compounds (VOC) based on previous detections. Each well was sampled in January and the results are shown on the next page. PCE and TCE are found in all five wells except for Well 9 where TCE has not been detected. The PCE concentration ranged from 0.48 parts per billion [ppb] in Well 11 to 3.9 ppb in Well 15. All VOC that were detected are below the maximum contaminant level (MCL) – the regulatory limit. The table does not include results for trihalomethanes (TTHM), compounds that form as a result of the chlorination of drinking water.

An additional seven wells were tested for VOC in January or February and only TTHM were detected at some wells.

VOLATILE ORGANIC COMPOUNDS	UNITS	MCL	9	11	14	15	18
			1/23	1/23	1/24	1/23	1/24
Dichlorodifluoromethane	ppb	--	<0.11	<0.11	[0.15]	<0.11	<0.11
1,2-Dichloroethylene (cis)	ppb	70	<0.13	[0.33]	<0.13	<0.13	<0.13
Tetrachloroethylene [PCE]	ppb	5	1.5	0.48	0.53	3.9	0.93
Trichloroethylene [TCE]	ppb	5	<0.12	[0.24]	[0.25]	0.43	[0.14]
Trichlorofluoromethane	ppb	--	<0.12	0.78	<0.12	<0.12	<0.12

Policy Goals for Iron and Manganese:

Routine distribution testing from January through March showed one out of 84 samples [1.2%] tested above the iron and manganese policy goals of 0.3 mg/L and 50 ug/L, respectively. See the table for summary statistics.

Manganese, ug/L			Iron, mg/L		
	Jan - Mar	Apr - Jun		Jan - Mar	Apr - Jun
Policy Goal	50	50	Policy Goal	0.3	0.3
Minimum	0.2		Minimum	0.00	
Median	4.5		Median	0.03	
Average	6.3		Average	0.04	
90th	14		90th	0.09	
95th	18		95th	0.13	
Maximum	66		Maximum	0.31	
Count	84		Count	84	
>50	1		>0.3	1	
>50, %	1.2%		>0.3, %	1.2%	

Unregulated and Emerging Contaminants:

Chromium-6

Sixteen wells were monitored for chromium-6 in January and February. The results were similar to those for 2011: chromium-6 is the predominant species, wells cased to the Mt. Simon aquifer are free of chromium-6 (<0.02 parts per billion [ppb]), with few exceptions chromium-6 measures below 1 ppb, and the highest concentration (1.95 ppb) was observed at Well 14.

Two wells and the sentinel well for Well 29 were sampled for chromium-6 in April. Results are not yet available.

The water utility has received preliminary results from the rock cuttings analysis being investigated by the Wisconsin Geological Survey. Details and general conclusions will be discussed at the Water Quality Technical Advisory Committee meeting on May 1st.

Earlier this month the utility received word that funding was approved for the Water Research Foundation project to evaluate potential sources, fate, and treatment of

chromium-6. Contract issues are being worked on and an initial teleconference including participating utilities took place April 20th.

Public Outreach on Water Quality:

A final draft of the annual Consumer Confidence Report (CCR) is being reviewed by staff prior to submittal to the printer. Copies of the report will be mailed to all water customers in May.

In addition to the CCR, the Annual Report on Water Quality Monitoring has been completed and is now available on the water utility website. This report takes a more comprehensive look at water quality monitoring and, through incorporation of the Water Quality Watch List, highlights the contaminants of concern and planned actions for monitoring or treatment.

In March, water utility staff gave a tour of Well 13 to a 2nd/3rd grade class from Gompers Elementary and gave a water talk to a 4th grade class at Randall Elementary. The utility also plans to participate in Toki Middle School's Earth Day Fair on May 24th and 25th.

Water Utility staff continues to engage the public on planned capital improvement projects that will improve water quality – Well 15 VOC mitigation, Well 7 & 8 iron and manganese filtration, and a replacement well for abandoned Well 3. In addition to Citizen Advisory Panel (CAP) meetings for these projects, two open houses reviewing the progress of the Eastside Water Supply Project were held during the week of April 16.

I report compliance.