

FILE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

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In Matter of the Application of Ohio American Water)
Company for Authority to Increase its Rates For Water and) Case No. 07-1112-WS-AIR
Sewer Service Provided to its Entire Service Area)

MEMORANDUM CONTRA
THE OFFICE OF THE OHIO CONSUMERS' COUNSEL'S
MOTION TO DISMISS OHIO AMERICAN WATER COMPANY'S
APPLICATION TO INCREASE RATES FOR THE AREA OF "WATER C" OR,
IN THE ALTERNATIVE, MOTION TO AMEND THE APPLICATION TO
EXCLUDE A RATE INCREASE FOR THE AREA OF "WATER C" OR, IN THE
ALTERNATIVE, MOTION TO TOLL THE APPLICATION REGARDING THE
AREA OF "WATER C"
BY
OHIO AMERICAN WATER COMPANY

On November 13, 2007, Ohio American Water Company ("Ohio American" or "Company") filed an application for authority to increase its rates ("Application"). The Office of the Ohio Consumers' Counsel ("OCC") filed a motion to dismiss the application for the area of "Water C" or in the alternative motion to amend the application to exclude a rate increase for the area of "Water C" or in the alternative motion to toll the Application regarding the area of "Water C" ("Motion") on December 13, 2007. OCC agreed to a one-week extension of time to file this Memorandum Contra that was approved by Entry of the Attorney Examiner on December 20, 2007. OCC seeks to dismiss the application or in the alternative requests the Public Utilities Commission of Ohio ("Commission") to amend Ohio American's Application to exclude "Water C" from an increase in rates or toll the Application until Ohio American complies with Paragraph 12 of the Stipulation in Case No. 06-433-WS-AIR ("Stipulation"), and

the letters dated July 13, 2007 and July 20, 2007 filed by the Commission staff and OCC, respectively.

The basis of OCC's motion, that Ohio American is violating the terms of the Stipulation, is completely unfounded. Rather, OCC is imputing words and meanings into the Stipulation that simply do not exist. The Stipulation, and particularly Paragraph 7, clearly states that Ohio American will not seek a rate increase for "Water C" until the discoloration issue has been resolved; it does not say that Ohio American will refrain from seeking an increase for Water C until each and every condition contained in Paragraph 12 have been completed, as the OCC is arguing. The Stipulation was carefully crafted pursuant to very contentious negotiations. As such, the Commission should give meaning to the words contained in that document and avoid any unwarranted insertions of additional conditions, as argued by the OCC.

The "stay out" provision of the Stipulation is contained in Paragraph 7. That paragraph states:

Ohio American agrees not to request rate relief for customers in "Water C," former Citizens water customers in the form of an increase in rates (AIR) until the discoloration issue has been resolved as set forth in Paragraph 12 of this Stipulation.

Emphasis added. The "discoloration issue" in this case is the discoloration, or turbidity, that Ohio American had been experiencing in the water that it delivered to customers in the Huber Ridge system. The reference "as set forth in Paragraph 12" provides guidance for what is meant by "resolve" in the context of the discoloration issue. Notably, it does not say that the "discoloration issue is not resolved until each provision of Paragraph 12 has been completed" as the OCC is attempting to re-draft it. Paragraph 12 contains very specific criteria that were agreed to by the parties as to what constitutes a level of water quality that is not "discolored," because

that term is susceptible to many different meanings. This section was purposefully crafted and was intended to erase any ambiguity about what would constitute an elimination of the discoloration. Stipulation, Paragraph 12G contains that test as contemplated by Paragraph 7. In fact, it is the only point in the document containing a standard to be used to determine whether the water discoloration problem has been resolved. That provision, in its entirety, states:

By June 30, 2007, if discoloration continues in the Huber Ridge distribution system, the Company will cease charging the reverse osmosis surcharge each month until the discoloration has been eliminated. After June 30, 2007, once the discoloration has been eliminated for a given month, the Company may reinstate the reverse osmosis surcharge, but if the discoloration returns prior to the elimination of discoloration for a period of six (6) months, the Company shall cease charging the reverse osmosis surcharge for each month that the discoloration standard has not been met. Once the Company has provided water that is not discolored for six (6) consecutive months, the Company may continue to charge the reverse osmosis surcharge without reference to the discoloration standard.

The standard for determining that discolored water has been eliminated shall be that each month the turbidity level of at least 95% of the samples of water taken at the distribution system sampling locations (except the control sampling location) defined in the Plan shall be (i) equal to one (1) nephelometric turbidity unit (NTU) or (ii) equal to or less than the average NTUs at the control site, whichever measurement is greater.

This standard is the only definition of a “fix” to the Huber Ridge water quality issues in the Stipulation. Without question, the timing of when the discoloration issue will be considered resolved under the terms of Paragraph 7 is co-terminus with Paragraph 12G simply because this is the only place in the entire Stipulation that touches on a determination of whether the problem has indeed been fixed. Once this test is met, there is nothing left to “fix.”

A plain reading of Stipulation Paragraph 12G shows an unambiguous intent that the discoloration issue will be resolved by June 30, 2007. The anti-backsliding feature of Paragraph

12G bears this out. In fact, according to the anti-backsliding provision of Paragraph 12G, the water quality must be remedied by June 30, 2007, or else penalties will apply.

It is highly significant that the anti-backsliding provision of Paragraph 12G has now passed without being triggered. Ohio American in fact has demonstrated that the discoloration issue was remedied prior to June 30, 2007. Ohio American has also demonstrated that the remedy has been maintained for the six-month period as required by Paragraph 12G. The Affidavit of Thomas Schwing, supporting the turbidity samples taken from March 2007 through December 2007, is attached hereto. This anti-backsliding provision has been completely satisfied. Yet the six-month duration of the anti-backsliding provision of Paragraph 12G was itself separate and distinct from the provision of Paragraph 7.

The anti-backsliding provision of Paragraph 12G is inconsistent with the OCC's reading of Paragraph 12 that the water quality issue will not be considered resolved until each condition in Paragraph 12 has been completed. The penalty provisions set forth in 12G do not apply so long as the discoloration problem remains remedied ("fixed"). This entire provision makes no sense under OCC's interpretation—that the problem is not resolved until all the terms and conditions of Paragraph 12 (including the reporting and monitoring provisions) have been completed. Ohio American would not have agreed to penalty provisions that were guaranteed to apply, and under OCC's interpretation, there is no way for Ohio American to have complied by June 30, 2007. Paragraph 12G reflects Ohio American's high level of confidence that the problem would be demonstrably resolved before June 30, 2007. The evidence demonstrates that Ohio American was correct in its belief that the problem could be fixed by June 30, 2007.

Certainly, Paragraph 12 involves other steps and other conditions for Ohio American to meet, but those other conditions contained in Paragraph 12 address other issues beyond the

question of whether the discoloration issue has been “fixed.” For instance, Paragraph 12Bii contains a requirement that Ohio American report objective, measurable criteria for determining water quality generally in the Huber Ridge system. But this is a reporting requirement and does not address the specific water chemistry-related turbidity problem that was the subject of Paragraph 7 and Paragraph 12G. Only Paragraph 12G squarely defines the resolution of the discoloration issue and it is only Paragraph 12G that Paragraph 7 was contingent upon. The OCC is simply attempting to convert Ohio American’s agreement to document its “fix” of the discoloration issue into a “stay-out” provision, which it is not.

The Commission’s Opinion and Order also supports the notion that the reporting and anti-backsliding provisions of Paragraph 12 were not intended as conditions precedent to Ohio American’s fulfillment of Paragraph 7. The Commission admonished Ohio American that it was putting the Company on notice “that if the water quality and service issues do not improve by the time of the next rate case, we will take this into account in determining the appropriate rate of return.” Order at p. 11. This warning is perfectly consistent with the terms of the Stipulation Paragraph 7 that, once the water quality issue has been resolved, Ohio American may seek rate relief. According to the water quality standard set in Paragraph 12, the water quality issues have been resolved, and Ohio American is appropriately seeking rate relief.

The OCC is attempting to insert a punitive intent into Paragraph 12 that does not exist. The pledge contained in Paragraph 7 embodies the notion that it would be unfair to the Huber Ridge customers (the largest system in Water C) to be subject to an additional rate proceeding while simultaneously receiving substandard water quality. However, once those customers are receiving water that meets the standard specified in the Stipulation, then, by both its terms and its logic, the condition of Paragraph 7 has been met: the Huber Ridge customers are receiving the

level of service to which they are entitled, and Ohio American is, in turn, entitled to seek rates that reflect the cost of service. The OCC seeks to demolish this logical symmetry by arguing that Huber Ridge customers are not only entitled to the agreed-upon level of water quality, but also a freeze on rates for an additional, arbitrary period of time. This is patently unfair to Ohio American, and it is a notion that cannot be found in the Stipulation. Ohio American has kept its part of the bargain; the OCC has not.

There are other reasons why the Commission should not accept the additional terms that the OCC is attempting to insert into the Stipulation. As this Commission is well aware, the cost to provide adequate water service continues to increase as substantial new investments must be made to replace aging infrastructure, in addition to other escalating costs such as power and healthcare. Artificial “stay-out” provisions only serve to put off the unavoidable day of reckoning when rates must be raised to match the true cost of service, leading to possible rate shock and thwarting conservation efforts by keeping rates artificially low. This is poor public policy and will make the future rate cases more difficult than they otherwise might be, from both the perspective of the Company, as well as its customers. One of the main premises of utility regulation is that rates should be just and reasonable from the perspective of both the consumers and the regulated utilities. Rates for adequate service that are artificially too low fail this test.

Thus Ohio American urges the Commission to deny OCC’s motion to dismiss and its alternate request to exclude Water C from the increase and its alternative to toll the application regarding Water C.

Respectfully submitted on behalf of
OHIO AMERICAN WATER COMPANY



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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the MEMORANDUM CONTRA THE OFFICE OF
THE OHIO CONSUMERS' COUNSEL'S MOTION was either served by electronic mail or
regular U.S. Mail this 4th of January 2008.


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**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In Matter of the Application of Ohio American Water)
Company for Authority to Increase its Rates For Water and) Case No. 07-1112-WS-AIR
Sewer Service Provided to its Entire Service Area)

**AFFIDAVIT
OF
THOMAS SCHWING
IN SUPPORT OF
MEMORANDUM CONTRA**

STATE OF OHIO)
) ss.
COUNTY OF FRANKLIN)

Thomas Schwing having been duly cautioned, deposes and states as follows in support of the Memorandum Contra the Office of the Ohio Consumers' Counsel's Motion To Dismiss Ohio American Water Company's Application To Increase Rates For The Area Of "Water C" Or, In the Alternative, Motion To Amend the Application To Exclude A Rate Increase for the Area of "Water C" Or In The Alternative, Motion To Toll The Application Regarding the Area of "Water C" filed on December 13, 2007 ("Memo Contra") of Ohio American Water Company ("Ohio American" or "Company"):

I am employed by Ohio American as the Network Operations Superintendent of the Franklin County District. I am very familiar with the operations of the Ohio American in the Franklin County District and with the commitments set forth in the Stipulation filed in Ohio American's last rate case, Case No. 06-433-WS-AIR as they pertain to the Franklin County District and in particular as they pertain to the Huber Ridge system. I was present for all of the negotiations that resulted in all the commitments made in Condition 12 of the Stipulation. I have had the general responsibility to assure that Ohio American met its commitments with respect to Huber Ridge. I was also responsible for the development of the plan for improvements to the Huber Ridge water plant and for the plan concerning the discoloration issue in the distribution

plant. I have had general responsibility for assuring that samples were taken at the control site and the sample sites on the Huber Ridge distribution system. The samples, however, were actually taken by personnel in the Environmental Management and Compliance Group Quality of American Water Works Service Company of the Central Region Office and those personnel do not report to me.

Paragraph 12 G of the Stipulation required that if the discoloration issue at the Huber Ridge distribution plant had not been addressed and solved by June 30, 2007, Ohio American would cease charging the reverse osmosis surcharge for each month the discoloration occurred or re-appeared and that once a consecutive six month period of no discoloration was met, the potential penalty of ceasing to charge the reverse osmosis surcharge would end. Paragraph 12 G set forth the standard for determining that discolored water has been eliminated. It required a turbidity level of at least 95% of the samples of water taken at the distribution system sampling locations be equal to one (1) nephelometric turbidity unit (NTU) or (ii) equal to or less than the average NTUs at the control site, whichever measurement is greater.

The data demonstrates that the Huber Ridge discolored water has been eliminated and based on that data collected and reported to me by the Water Quality staff, I conclude the following:


- 1) As shown on Attachment A to this affidavit, there were a total of 208 turbidity samples collected from the four (4) Huber Ridge water distribution sample sites taken from March 2007 through the end of the year.
- 2) Excluding the control site located at Caracus Court, there were a total of 163 turbidity samples collected at the non-control sites.
- 3) From the period July 2007 through the end of the year, there were 125 samples taken from the four (4) Huber Ridge sample sites.

- 4) During this six month period, excluding the control site located at Caracus Court, there were a total of 100 turbidity samples collected at the non-control sites
- 5) The single measured value that exceeded the turbidity standard was measured at 2.57 NTUs on July 3, 2007 at the Vickers Drive sample station.
- 6) As part of the Company's program to improve water quality, the Company undertook an aggressive program to locate all water valves. A number of valves were identified as being buried. Three of those valves impacted the Vickers Drive area. After identifying buried valves, the Company undertook a systematic program to unearth them, verify their position (open or closed), and determine whether they were operational or required repair. The water main valve on Hunt Club at Vickers as well as the valve to the blow-off at the Vickers Drive water main's dead end were repaired as part of this systematic program during the week of July 2, 2007. As part of the repair work on these two valves, the water flow direction on Vickers Drive was changed from a two source feed to a single feed pattern (unidirectional) during the flushing activity. The repair work and/or flushing activity would skew the value of any sample collected from the sample station site because unidirectional flushing is designed to scour and suspend debris so it can be removed from the water main. Therefore in any sampling during this period, there would be an elevated turbidity measurement caused by the flushing activity. Moreover, this type of water turbidity is not related to water chemistry-based discoloration as recognized by the introductory paragraph to Condition 12.
- 7) The 2.57 NTU sample value is 4.28 standard deviations from the sample site's arithmetic mean value of 0.32 NTU. This high standard deviation indicates there is a low confidence level that the 2.57 NTU sample value is representative of the normal values.

- 8) Excluding the 2.57 NTU sample value due to known construction work in the location at the time of the sample collection and due to its low confidence level as being a representative sample, then 100% of the Huber Ridge water distribution sample sites taken between July 1, 2007 and December 31, 2007 measured met the Stipulation's turbidity standard of less than or equal to 1 NTU.
- 9) Including the low confidence 2.57 NTU sample value at Vickers Drive, then 99% of the Huber Ridge water distribution sample sites between July 1, 2007 and December 31, 2007 measured met the Stipulation's turbidity standard of less than or equal to 1 NTU.
- 10) Therefore the data demonstrates that the Company has met the minimum requirement of "at least 95% of the samples of water taken at the distribution system sampling locations (except the control sampling location) defined in the Plan shall be (i) equal to one (1) nephelometric turbidity unit (NTU) or (ii) equal to or less than the average NTUs at the control site, whichever is greater" as set forth in Paragraph 12 G.


Thomas Schwing

Subscribed and sworn to before me
this 4th day of January 2008.



Notary Public, State of Ohio

My Commission Expires:



TERESA E. ORAHOOD

Notary Public, State of Ohio

My Commission Expires Oct 19, 2010

Hube Ridge Weekly System Sampling

Zone	Date	Time	Address	Fe	Mn	pH	Tot. Hard.	Alk.	TDS	Langlier's Index	Ca-Hard.	Turbidity	Cl _{total}	Cl _{free}	Comments
Zone 1	3/7/2007	14:04	5910 Cairo	0.03	0.05	8.59	140	102	210		89	0.42	0.38	0.46	
Zone 2	3/7/2007	14:17	3355 Vickers	0.00	0.04	8.57	141	106	220	0.82	92	0.28	0.04	0.01	
Zone 3	3/7/2007	13:51	3795 Caracus	0.00	0.04	8.57	137	106	210	0.83	93	0.36	0.38	0.23	
Zone 4	3/7/2007	13:55	3880 Bogota	0.00	0.07	8.70	138	104	210	0.73	89	0.81	0.75	0.88	
Zone 5	3/7/2007	14:30	4164 Carnation	0.01	0.05	8.70	140	106	210	0.84	93	0.84	0.53	0.15	
Zone 1	3/22/2007	13:30	Cairo Station	0.02	0.08	8.81	143	116	180	0.95	100	1.00	0.82	0.58	Sampling site not operational due to leak.
Zone 2	3/22/2007	14:24	3385 Vickers	0.00	0.06	8.70	146	114	200	0.78	105	0.48	0.39	0.14	customer collected sample
Zone 3	3/22/2007	NA	Caracus Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Sampling site not installed, went to every house on count(8) they wouldn't answer door, or were not there
Zone 4	3/22/2007	13:25	Bogota Station	0.01	0.08	8.72	144	116	190	0.74	101	0.59	0.72	0.62	
Zone 5	3/22/2007	14:48	Carnation Station	0.00	0.08	8.68	145	114	170	0.84	101	0.98	0.75	0.57	
Zone 1	3/29/2007	13:20	Cairo Station	0.03	0.03	8.79	154	122	220	0.84	108	0.45	0.78	0.48	
Zone 2	3/29/2007	13:29	Vickers Station	0.04	0.01	8.80	152	120	200	0.83	106	0.71	0.7	0.66	
Zone 3	3/29/2007	NA	Caracus Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Sampling site not installed
Zone 4	3/29/2007	13:14	Bogota Station	0.04	0.01	8.89	158	126	200	0.77	109	0.38	0.67	0.6	
Zone 5	3/29/2007	13:34	Carnation Station	0.01	0.02	8.79	153	120	200	0.84	108	0.34	0.68	0.63	
Zone 1	4/4/2007	9:35	Cairo Station	0.03	0.06	8.8	131	112	170	0.74	95	0.37	0.81	0.62	
Zone 2	4/4/2007	4:39	Vickers Station	0.04	0.04	8.77	135	112	170	0.71	100	0.46	0.73	0.68	
Zone 3	4/4/2007	NA	Caracus Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Sampling site not installed
Zone 4	4/4/2007	10:48	Bogota Station	0.00	0.04	8.82	139	108	170	0.76	104	0.35	0.6	0.56	
Zone 5	4/4/2007	9:46	Carnation Station	0.02	0.07	8.8	137	114	180	0.78	99	0.44	0.68	0.63	
Zone 1	4/10/2007	1:12	Cairo Station	0.00	0.05	8.9	137	110	180	0.89	88	0.56	0.98	0.77	
Zone 2	4/10/2007	1:08	Vickers Station	0.00	0.06	8.70	129	108	180	0.66	88	0.53	0.66	0.57	
Zone 3	4/10/2007	1:18	Caracus Station	0.01	0.06	8.75	132	112	190	0.73	93	0.74	0.68	0.77	
Zone 4	4/10/2007	1:21	Bogota Station	0.03	0.02	8.68	133	114	190	0.70	92	0.40	0.89	0.61	
Zone 5	4/10/2007	1:00	Carnation Station	0.00	0.09	8.71	139	112	190	0.70	91	0.67	0.92	0.84	
Zone 1	4/17/2007	1:14	Cairo Station	0.02	0.01	8.67	131	112	180	0.65	94	0.60	0.84	0.68	
Zone 2	4/17/2007	1:10	Vickers Station	0.00	0	8.67	129	110	180	0.64	94	0.61	0.72	0.62	
Zone 3	4/17/2007	1:20	Caracus Station	0.09	0.01	8.85	132	110	180	0.65	93	1.25	0.75	0.61	Not a representative sample
Zone 4	4/20/2007	1:55	Caracus Station	0.03	0.01	8.78	130	110	180	0.78	90	0.56	0.67	0.52	Reanalyzed Caracus due to high turbidity
Zone 5	4/17/2007	1:23	Bogota Station	0.01	0.01	8.62	131	112	180	0.43	97	0.59	0.73	0.5	
Zone 1	4/17/2007	1:08	Carnation Station	0.02	0.03	8.58	128	108	170	0.34	92	0.63	0.74	0.54	
Zone 2	4/24/2007	9:05	Cairo Station	0.01	0	8.82	139	112	190	0.88	93	0.33	0.84	0.72	
Zone 3	4/24/2007	9:11	Vickers Station	0.00	0	8.78	134	106	180	0.78	90	0.57	0.77	0.73	
Zone 4	4/24/2007	8:57	Caracus Station	0.01	0	8.76	139	112	180	0.83	93	0.62	0.73	0.58	
Zone 5	4/24/2007	8:51	Bogota Station	0.00	0	8.77	128	108	180	0.78	85	0.42	0.78	0.66	
Zone 1	5/1/2007	2:47	Cairo Station	0.01	0.01	8.84	153	120	200	0.78	107	0.54	0.61	0.46	
Zone 2	5/1/2007	3:03	Vickers Station	0.00	0.07	8.76	144	110	180	0.78	93	1.00	1.06	0.93	
Zone 3	5/1/2007	2:31	Caracus Station	0.01	0.01	8.72	137	112	200	0.76	88	0.39	0.98	0.72	
Zone 4	5/1/2007	2:12	Bogota Station	0.00	0	8.72	145	110	200	0.82	85	0.51	0.93	0.78	
Zone 5	5/1/2007	3:18	Carnation Station	0.00	0	8.69	136	110	180	0.71	95	0.48	0.96	0.69	
Zone 1	5/8/2007	10:03	Cairo Station	0.00	0.01	8.84	135	112	180	0.78	94	0.41	1.00	0.8	
Zone 2	5/8/2007	10:09	Vickers Station	0.04	0	8.82	141	110	180	0.77	91	0.31	1.01	0.87	
Zone 3	5/8/2007	9:53	Caracus Station	0.04	0.04	8.82	146	110	190	0.77	98	0.37	1.03	0.87	
Zone 4	5/8/2007	9:47	Bogota Station	0.03	0	8.78	137	110	180	0.74	90	0.45	0.94	0.76	
Zone 5	5/8/2007	10:19	Carnation Station	0.03	0.01	8.81	138	110	180	0.73	91	0.37	0.96	0.86	
Zone 1	5/17/2007	1:15	Cairo Station	0.01	0.03	8.76	153	118	200	0.80	87	0.66	1.03	0.86	
Zone 2	5/17/2007	1:25	Vickers Station	0.02	0	8.68	145	116	200	0.69	98	0.42	0.93	0.79	
Zone 3	5/17/2007	1:03	Caracus Station	0.00	0.02	8.73	144	118	210	0.81	94	0.8	0.90	0.99	
Zone 4	5/17/2007	12:30	Bogota Station	0.00	0	8.65	150	118	210	0.72	103	0.47	0.93	0.73	

Zone 5	5/17/2007	1:38	Carnation Station	0.01	0.02	8.63	182	116	200	0.74	104	0.45	0.88	0.71
Zone 1	5/24/2007	8:18	Cairo Station	0.01	0	8.74	141	116	190	0.74	96	0.31	0.92	0.88
Zone 2	5/24/2007	8:25	Vickers Station	0.02	0	8.81	136	112	200	0.80	98	0.22	0.91	0.83
Zone 3	5/24/2007	8:11	Carcus Station	0.02	0.05	8.75	136	114	200	0.73	95	0.37	0.63	0.57
Zone 4	5/24/2007	8:03	Bogota Station	0.02	0.03	8.74	136	114	200	0.73	95	0.27	0.91	0.86
Zone 5	5/24/2007	8:35	Carnation Station	0.03	0	8.75	143	114	190	0.76	99	0.44	0.79	0.51
Zone 1	5/30/2007	13:30	Cairo Station	0.01	0.02	8.63	144	112	200	0.64	94	0.21	0.87	0.81
Zone 2	5/30/2007	13:37	Vickers Station	0.01	0.01	8.59	136	110	200	0.56	90	0.39	0.92	0.75
Zone 3	5/30/2007	13:24	Carcus Station	0.03	0.02	8.55	150	116	210	0.83	104	0.25	0.87	0.66
Zone 4	5/30/2007	13:16	Bogota Station	0.01	0.02	8.44	148	120	210	0.53	103	0.2	0.88	0.76
Zone 5	5/30/2007	13:06	Carnation Station	0.01	0.02	8.57	140	110	200	0.57	91	0.23	0.90	0.61
Zone 1	6/5/2007	2:50	Cairo Station	0.00	0.01	8.78	122	114	200	0.81	99	0.17	0.74	0.62
Zone 2	6/5/2007	2:58	Vickers Station	0.01	0.02	8.72	140	110	200	0.86	98	0.29	0.80	0.55
Zone 3	6/5/2007	2:42	Carcus Station	0.01	0.01	8.8	142	112	200	0.82	100	0.25	0.72	0.88
Zone 4	6/5/2007	2:34	Bogota Station	0.00	0.01	8.76	144	114	210	0.80	102	0.19	0.78	0.58
Zone 5	6/5/2007	3:06	Carnation Station	0.00	0.01	8.73	148	114	200	0.73	99	0.27	0.83	0.73
Zone 1	8/11/2007	1:43	Cairo Station	0.00	0	8.81	134	110	200	0.78	96	0.19	0.88	0.57
Zone 2	8/11/2007	1:23	Vickers Station	0.00	0.01	8.73	140	110	200	0.88	108	0.52	0.65	0.47
Zone 3	8/11/2007	1:57	Carcus Station	0.00	0	8.66	140	114	190	0.80	90	0.33	0.38	0.18
Zone 4	8/11/2007	1:15	Bogota Station	0.00	0.02	8.72	134	108	200	0.80	90	0.59	0.87	0.69
Zone 5	8/11/2007	1:35	Carnation Station	0.00	0.02	8.68	138	114	200	0.87	90	0.47	0.49	0.17
Zone 1	8/19/2007	1:38	Cairo Station	0.00	0	8.65	160	112	210	0.61	104	0.20	0.80	0.60
Zone 2	8/19/2007	1:14	Vickers Station	0.02	0.09	8.53	180	116	210	0.57	100	0.29	0.77	0.50
Zone 3	8/19/2007	1:25	Carcus Station	0.05	0.04	8.57	170	116	210	0.59	96	0.37	0.80	0.37
Zone 4	8/19/2007	1:14	Bogota Station	0.02	0.03	8.53	160	116	210	0.57	100	0.29	0.77	0.60
Zone 5	8/19/2007	2:04	Carnation Station	0.03	0.02	8.6	154	114	210	0.62	104	0.32	0.88	0.52
Zone 1	8/27/2007	1:28	Cairo Station	0.01	0.01	8.64	134	112	210	0.71	100	0.26	0.84	0.51
Zone 2	8/27/2007	1:45	Vickers Station	0.00	0.02	8.65	154	112	210	0.70	100	0.53	0.92	0.73
Zone 3	8/27/2007	1:21	Carcus Station	0.00	0.02	8.56	154	116	220	0.65	102	0.36	0.86	0.53
Zone 4	8/27/2007	1:15	Bogota Station	0.00	0.01	8.52	144	114	220	0.61	104	0.22	0.87	0.58
Zone 5	8/27/2007	1:56	Carnation Station	0.00	0.02	8.6	158	118	220	0.66	104	0.30	0.86	0.6
Zone 1	7/3/2007	1:34	Cairo Station	0.00	0.04	8.56	146	112	200	0.82	98	0.29	0.86	0.6
Zone 2	7/3/2007	1:40	Vickers Station	0.05	0.19	8.56	150	116	200	0.84	98	2.57	1.10	0.94
Zone 3	7/3/2007	1:25	Carcus Station	0.00	0.03	8.44	154	114	210	0.56	114	0.34	0.84	0.43
Zone 4	7/3/2007	1:19	Bogota Station	0.00	0.02	8.42	154	114	210	0.53	108	0.23	0.85	0.68
Zone 5	7/3/2007	1:50	Carnation Station	0.00	0.04	8.44	160	114	200	0.50	106	0.55	0.90	0.69
Zone 1	7/11/2007	1:26	Cairo Station	0.00	0.03	8.56	146	110	220	0.84	100	0.17	0.60	0.45
Zone 2	7/11/2007	1:19	Vickers Station	0.00	0.05	8.51	152	114	220	0.63	106	0.47	0.72	0.53
Zone 3	7/11/2007	1:35	Carcus Station	0.00	0.02	8.55	148	110	220	0.63	104	0.19	0.74	0.57
Zone 4	7/11/2007	1:41	Bogota Station	0.00	0.02	8.5	146	112	210	0.56	100	0.12	0.75	0.58
Zone 5	7/11/2007	1:09	Carnation Station	0.01	0.03	8.5	150	110	210	0.60	104	0.22	0.70	0.5
Zone 1	7/17/2007	1:37	Cairo Station	0.03	0.04	8.59	144	108	210	0.58	94	0.14	0.65	0.83
Zone 2	7/17/2007	1:47	Vickers Station	0.02	0.08	8.55	144	104	200	0.56	92	0.66	0.77	0.95
Zone 3	7/17/2007	1:24	Carcus Station	0.00	0.02	8.45	144	106	200	0.48	96	0.17	0.51	0.80
Zone 4	7/17/2007	1:13	Bogota Station	0.04	0.02	8.5	144	108	210	0.42	94	0.17	0.84	0.95
Zone 5	7/17/2007	2:02	Carnation Station	0.06	0.03	8.39	146	104	200	0.46	104	0.28	0.75	0.96
Zone 1	7/24/2007	1:24	Cairo Station	0.01	0.014	8.43	136	102	200	0.41	86	0.13	0.85	0.48
Zone 2	7/24/2007	1:33	Vickers Station	0.01	0.039	8.51	144	106	200	0.45	81	0.34	0.93	0.95
Zone 3	7/24/2007	1:12	Carcus Station	0.02	0.019	8.62	144	114	200	0.68	80	0.14	0.83	0.76
Zone 4	7/24/2007	1:02	Bogota Station	0.02	0.023	8.46	156	110	200	0.38	70	0.1	0.95	0.89
Zone 5	7/24/2007	1:47	Carnation Station	0.02	0.03	8.46	144	106	200	0.34	72	0.62	0.96	0.81
Zone 1	7/31/2007	1:26	Cairo Station	0.00	0.03	8.52	154	108	220	0.60	102	0.27	0.87	0.68
Zone 2	7/31/2007	1:32	Vickers Station	0.00	0.04	8.58	148	100	200	0.29	100	0.29	0.89	0.80
Zone 3	7/31/2007	1:18	Carcus Station	0.03	0.07	8.51	142	106	210	0.68	106	0.97	0.83	0.63
Zone 4	7/31/2007	1:11	Bogota Station	0.06	0.02	8.49	158	108	210	0.53	100	0.13	0.93	0.73
Zone 5	7/31/2007	1:42	Carnation Station	0.02	0.03	8.58	150	116	210	0.66	98	0.29	0.90	0.13
Zone 1	8/7/2007	8:26	Cairo Station	0.03	0.02	8.46	152	114	220	0.55	104	0.10	0.66	0.53

Flushing in Area
Flushing in Area

Zone 2	8/7/2007	8:32	Vickers Station	0.04	0.08	8.51	144	106	210	0.56	96	0.91	0.97	0.82
Zone 3	8/7/2007	8:19	Caracus Station	0.01	0.01	8.5	146	106	210	0.84	96	0.12	0.88	0.31
Zone 4	8/7/2007	8:10	Bogota Station	0.00	0.01	8.59	145	110	210	0.56	98	0.09	0.91	0.59
Zone 5	8/7/2007	8:43	Camalion Station	0.02	0.01	8.59	144	110	200	0.62	94	0.12	0.91	0.51
Zone 1	8/14/2007	1:48	Cairo Station	0.00	0.02	8.67	146	108	210	0.71	100	0.15	0.98	0.83
Zone 2	8/14/2007	1:55	Vickers Station	0.00	0.02	8.63	150	112	220	0.71	98	0.2	0.91	0.73
Zone 3	8/14/2007	1:37	Caracus Station	0.00	0.01	8.62	144	110	210	0.69	100	0.07	0.89	0.69
Zone 4	8/14/2007	1:28	Bogota Station	0.00	0.01	8.64	144	108	210	0.71	100	0.07	0.96	0.59
Zone 5	8/14/2007	2:04	Camalion Station	0.00	0.01	8.69	148	110	200	0.71	98	0.07	0.97	0.75
Zone 1	8/21/2007	3:27	Cairo Station	0.02	0.04	8.65	140	110	210	0.67	98	0.31	0.91	0.66
Zone 2	8/21/2007	3:32	Vickers Station	0.02	0.02	8.61	146	110	210	0.87	98	0.1	0.86	0.69
Zone 3	8/21/2007	3:10	Caracus Station	0.02	0.03	8.55	146	110	210	0.59	99	0.24	0.87	0.59
Zone 4	8/21/2007	3:13	Bogota Station	0.01	0.02	8.71	148	112	220	0.79	100	0.17	0.87	0.68
Zone 5	8/21/2007	3:41	Camalion Station	0.01	0.04	8.61	142	110	210	0.82	96	0.13	0.92	0.59
Zone 1	8/28/2007	1:37	Cairo Station	0.00	0.00	8.21	144	106	210	0.24	144	0.17	0.93	0.61
Zone 2	8/28/2007	1:44	Vickers Station	0.01	0.00	8.52	144	108	210	0.50	80	0.24	0.84	0.63
Zone 3	8/28/2007	1:30	Caracus Station	0.00	0.01	8.2	150	118	210	0.30	98	0.12	0.76	0.50
Zone 4	8/28/2007	1:24	Bogota Station	0.00	0.02	8.11	158	112	210	0.21	97	0.09	0.76	0.52
Zone 5	8/28/2007	1:55	Camalion Station	0.00	0.00	8.21	144	108	220	0.22	88	0.09	0.84	0.59
Zone 1	9/4/2007	1:28	Cairo Station	0.00	0.02	8.51	140	104	210	0.53	96	0.11	0.86	0.64
Zone 2	9/4/2007	1:43	Vickers Station	0.03	0.01	8.51	142	108	210	0.56	96	0.07	0.87	0.44
Zone 3	9/4/2007	1:36	Caracus Station	0.02	0.01	8.5	140	104	200	0.52	96	0.07	0.93	0.65
Zone 4	9/4/2007	1:23	Bogota Station	0.00	0.01	8.55	138	106	210	0.61	96	0.10	0.85	0.50
Zone 5	9/4/2007	1:53	Camalion Station	0.00	0.01	8.5	140	104	200	0.51	98	0.08	0.90	0.75
Zone 1	9/11/2007	1:27	Cairo Station	0.05	0.01	8.37	150	102	210	0.36	100	0.18	0.97	0.72
Zone 2	9/11/2007	1:33	Vickers Station	0.03	0.02	8.43	150	106	210	0.47	98	0.08	0.94	0.65
Zone 3	9/11/2007	1:20	Caracus Station	0.02	0.01	8.37	149	104	210	0.23	100	0.07	0.86	0.60
Zone 4	9/11/2007	1:12	Bogota Station	0.03	0.02	8.2	144	102	210	0.25	100	0.09	0.56	0.40
Zone 5	9/11/2007	1:44	Camalion Station	0.02	0.02	8.27	146	106	210	0.28	102	0.09	0.88	0.69
Zone 1	9/18/2007	1:08	Cairo Station	0.00	0.04	8.55	142	102	200	0.55	94	0.22	1.08	0.84
Zone 2	9/18/2007	1:14	Vickers Station	0.01	0.02	8.56	146	104	200	0.58	92	0.36	0.90	0.84
Zone 3	9/18/2007	1:01	Caracus Station	0.02	0.05	8.43	150	104	210	0.44	94	0.33	0.98	0.78
Zone 4	9/18/2007	12:54	Bogota Station	0.00	0.04	8.56	148	104	210	0.39	94	0.08	0.93	0.79
Zone 5	9/18/2007	1:23	Camalion Station	0.00	0.02	8.34	144	108	200	0.30	92	0.19	0.97	0.9
Zone 1	9/25/2007	1:51	Cairo Station	0.01	0.03	8.7	152	108	210	0.74	94	0.29	0.88	0.49
Zone 2	9/25/2007	1:57	Vickers Station	0.00	0.02	8.68	144	104	210	0.69	90	0.47	0.81	0.53
Zone 3	9/25/2007	1:44	Caracus Station	0.00	0.03	8.71	150	106	200	0.74	92	0.33	0.81	0.39
Zone 4	9/25/2007	1:38	Bogota Station	0.00	0.03	8.45	150	108	210	0.50	96	0.27	0.83	0.82
Zone 5	9/25/2007	2:08	Camalion Station	0.00	0.03	8.71	140	106	210	0.89	98	0.12	0.82	0.64
Zone 1	10/2/2007	2:36	Cairo Station	0.00	0.01	8.69	146	106	210	0.72	96	0.06	0.98	0.74
Zone 2	10/2/2007	2:41	Vickers Station	0.00	0.01	8.76	150	106	210	0.80	98	0.07	0.97	0.88
Zone 3	10/2/2007	2:28	Caracus Station	0.00	0.01	8.74	150	106	210	0.76	94	0.18	0.94	0.70
Zone 4	10/2/2007	2:22	Bogota Station	0.00	0.01	8.59	144	110	210	0.66	102	0.05	0.91	0.74
Zone 5	10/2/2007	2:51	Camalion Station	0.00	0.01	8.73	150	108	200	0.76	94	0.2	0.98	0.77
Zone 1	10/9/2007	2:02	Cairo Station	0.01	0.01	8.67	148	110	210	0.68	90	0.09	0.97	0.69
Zone 2	10/9/2007	1:55	Vickers Station	0.00	0.02	8.70	148	108	220	0.76	94	0.09	0.87	0.64
Zone 3	10/9/2007	2:08	Caracus Station	0.03	0.02	8.70	148	110	210	0.72	96	0.09	0.89	0.68
Zone 4	10/9/2007	2:15	Bogota Station	0.01	0.02	8.60	146	108	210	0.59	90	0.06	0.90	0.88
Zone 5	10/9/2007	1:46	Camalion Station	0.03	0.02	8.70	144	110	220	0.75	94	0.04	0.88	0.66
Zone 1	10/16/2007	2:15	Cairo Station	0.04	0.04	8.64	144	106	210	0.56	80	0.26	1.06	0.78
Zone 2	10/16/2007	2:21	Vickers Station	0.02	0.00	8.67	144	110	210	0.87	88	0.12	0.90	0.72
Zone 3	10/16/2007	2:08	Caracus Station	0.02	0.01	8.62	150	106	210	0.59	90	0.15	0.97	0.83
Zone 4	10/16/2007	2:02	Bogota Station	0.02	0.01	8.64	152	110	220	0.55	92	0.08	0.94	0.77
Zone 5	10/16/2007	2:31	Camalion Station	0.01	0.01	8.71	150	110	210	0.69	86	0.13	0.92	0.81
Zone 1	10/23/2007	14:12	Cairo Station	0.02	0.01	8.76	150	110	210	0.73	90	0.13	0.84	0.60
Zone 2	10/23/2007	14:18	Vickers Station	0.01	0.00	8.68	158	108	210	0.84	90	0.08	0.86	0.83
Zone 3	10/23/2007	14:05	Caracus Station	0.02	0.01	8.67	144	114	210	0.56	76	0.28	0.76	0.58
Zone 4	10/23/2007	13:58	Bogota Station	0.00	0.00	8.76	156	112	210	0.69	80	0.13	0.85	0.73

Zone 6	10/23/2007	14:27	Carnation Station	0.02	0.00	8.66	148	110	210	0.60	84	0.09	0.99	0.53
Zone 1	10/30/2007	13:58	Cairo Station	0.00	0.02	8.59	150	108	210	0.57	90	0.07	0.93	0.76
Zone 2	10/30/2007	14:06	Vickers Station	0.00	0.02	8.55	150	110	210	0.53	84	0.16	0.99	0.63
Zone 3	10/30/2007	14:50	Caracus Station	0.01	0.02	8.63	158	112	210	0.54	90	0.09	0.96	0.52
Zone 4	10/30/2007	14:41	Bogota Station	0.01	0.02	8.59	158	114	210	0.55	100	0.05	0.97	0.51
Zone 5	10/30/2007	14:17	Carnation Station	0.02	0.02	8.62	146	112	200	0.51	70	0.1	0.50	0.30
Zone 1	11/6/2007	14:17	Cairo Station	0.03	0.01	8.59	156	116	210	0.63	100	0.87	1.02	0.82
Zone 2	11/6/2007	14:23	Vickers Station	0.02	0.01	8.43	152	114	220	0.48	104	0.17	0.92	0.62
Zone 3	11/6/2007	14:11	Caracus Station	0.03	0.01	8.58	156	114	210	0.65	104	0.09	0.97	0.81
Zone 4	11/6/2007	14:03	Bogota Station	0.01	0.01	8.54	158	120	210	0.82	106	0.07	0.94	0.73
Zone 5	11/6/2007	14:34	Carnation Station	0.02	0.02	8.58	160	120	210	0.66	106	0.23	0.96	0.56
Zone 1	11/13/2007	13:41	Cairo Station	0.03	0.02	8.55	156	114	210	0.80	106	0.08	1.00	0.82
Zone 2	11/13/2007	13:47	Vickers Station	0.02	0.01	8.54	156	116	210	0.60	106	0.06	0.96	0.62
Zone 3	11/13/2007	13:36	Caracus Station	0.02	0.01	8.55	158	116	220	0.61	106	0.07	0.90	0.74
Zone 4	11/13/2007	13:28	Bogota Station	0.01	0.01	8.51	162	118	210	0.57	110	0.09	0.92	0.68
Zone 5	11/13/2007	13:57	Carnation Station	0.02	0.01	8.5	164	118	210	0.54	104	0.08	0.98	0.51
Zone 1	11/20/2007	13:25	Cairo Station	0.02	0.02	8.8	152	114	210	0.84	100	0.15	1.11	0.79
Zone 2	11/20/2007	13:31	Vickers Station	0.01	0.01	8.67	156	114	210	0.71	100	0.06	0.97	0.64
Zone 3	11/20/2007	13:18	Caracus Station	0.02	0.02	8.65	158	14	210	0.72	104	0.21	1.05	0.72
Zone 4	11/20/2007	13:12	Bogota Station	0.01	0.01	8.61	160	118	220	0.68	104	0.06	0.99	0.79
Zone 5	11/20/2007	13:41	Carnation Station	0.01	0.02	8.63	158	118	210	0.68	102	0.04	1.00	0.81
Zone 1	11/27/2007	13:35	Cairo Station	0.00	0.03	8.55	150	112	210	0.55	100	0.09	1.02	0.67
Zone 2	11/27/2007	13:41	Vickers Station	0.00	0.02	8.33	150	112	210	0.33	100	0.06	0.92	0.74
Zone 3	11/27/2007	13:36	Caracus Station	0.00	0.02	8.45	154	116	200	0.66	104	0.10	0.70	0.59
Zone 4	11/27/2007	13:22	Bogota Station	0.00	0.02	8.64	154	114	210	0.86	104	0.06	0.92	0.51
Zone 5	11/27/2007	13:51	Carnation Station	0.00	0.02	8.65	154	112	210	0.65	104	0.05	0.89	0.79
Zone 1	12/4/2007	14:12	Cairo Station	0.02	0.03	8.48	188	118	240	0.32	94	0.10	1.03	0.86
Zone 2	12/4/2007	14:18	Vickers Station	0.01	0.02	8.55	156	114	200	0.51	80	0.05	0.98	0.72
Zone 3	12/4/2007	14:06	Caracus Station	0.02	0.02	8.45	158	112	200	0.43	86	0.11	0.78	0.44
Zone 4	12/4/2007	13:58	Bogota Station	0.01	0.01	8.48	158	118	210	0.47	84	0.06	0.85	0.53
Zone 5	12/4/2007	14:26	Carnation Station	0.02	0.02	8.53	154	114	200	0.49	84	0.07	0.87	0.66
Zone 1	12/11/2007	14:26	Cairo Station	0.00	0.02	8.64	134	104	180	0.53	80	0.08	0.90	0.41
Zone 2	12/11/2007	14:31	Vickers Station	0.00	0.02	8.65	140	106	180	0.53	80	0.08	0.80	0.65
Zone 3	12/11/2007	14:18	Caracus Station	0.00	0.03	8.64	138	108	190	0.51	81	0.14	0.87	0.54
Zone 4	12/11/2007	14:11	Bogota Station	0.00	0.02	8.66	138	108	180	0.54	78	0.06	0.77	0.41
Zone 5	12/11/2007	14:41	Carnation Station	0.00	0.02	8.64	142	106	180	0.56	86	0.1	0.86	0.51
Zone 1	12/18/2007	13:51	Cairo Station	0.00	0.01	8.60	142	108	190	0.68	106	0.07	0.98	0.84
Zone 2	12/18/2007	13:56	Vickers Station	0.01	0.02	8.63	138	108	180	0.71	106	0.89	1.00	0.78
Zone 3	12/18/2007	13:45	Caracus Station	0.01	0.02	8.61	144	110	190	0.68	98	0.11	0.88	0.82
Zone 4	12/18/2007	13:38	Bogota Station	0.00	0.02	8.68	132	108	190	0.69	94	0.07	1.00	0.91
Zone 5	12/18/2007	14:05	Carnation Station	0.00	0.01	8.56	138	106	190	0.60	100	0.07	0.96	0.79
Zone 1	12/27/2007	11:03	Cairo Station	0.00	0.01	8.63	154	106	210	0.68	96	0.07	0.95	0.63
Zone 2	12/27/2007	11:12	Vickers Station	0.00	0.01	8.68	150	110	210	0.79	106	0.06	0.99	0.89
Zone 3	12/27/2007	10:53	Caracus Station	0.01	0.01	8.63	140	104	200	0.69	100	0.11	0.81	0.53
Zone 4	12/27/2007	10:44	Bogota Station	0.00	0.01	8.58	162	108	210	0.64	98	0.08	0.94	0.83
Zone 5	12/27/2007	11:25	Carnation Station	0.01	0.00	8.60	150	110	270	0.73	100	0.10	0.99	0.76
RO cleaning														
Min														
Max														
Avg														