

O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration

Bayleaf Master System / Ethan's Glen Well #19 and #20, P97

Wake County, Water System No: NC0392373

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Bayleaf Master System / Ethan's Glen Well #19 and #20, P97. The Ethan's Glen water system is comprised of nine active wells and four points of entry (POE). The current number of customers served is 170 and the system is part of the Bayleaf Master Water System. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #19 and #20, P97.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump Runtime	Most Recent Inorganic Sampling Results Fe	
Well Name and No.	Approved	(hrs/day)	(mg/L)	Mn (mg/L)
Ethan's Glen Well #19 and #20, P97 (Samples collected September 17, 2014)	#19 – 18 gpm #20 – 11 gpm	#19 – 7.22 #20 – 9.6	1.87	0.0179
Ethan's Glen Well #19 and #20, P97 (Samples collected September 22, 2016)	#19 – 18 gpm #20 – 11 gpm	#19 – 10.6 #20 – 10.6	#19 – .080 #20 – .38	#19 – .078 #20 – .035

Page Two Bayleaf Master System Well #19 and #20, P97 October 6, 2016

Updated well head samples were collected September 22, 2016, and the results are shown in the table above.

Flushing

Aqua performed system-wide flushing in the Bayleaf Master System area, which includes Ethans Glen Well #19 and #20, P97, between January and April, 2016.

Customer Complaints

From January through September 2016, Aqua received no complaints from the customers at Ethan's Glen.

Corrective Action

Aqua plans to submit plans and specifications for the addition of a sequestering agent by December 30, 2016. Once approved and installed, Aqua will collect turbidity samples from the well and the point of entry and will evaluate the effectiveness of the sequestering agent.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re: Notice of Deficiency

Iron and Manganese Concentration

Bayleaf Master System

WSF ID No.: Barton Creek Bluffs Well #10 - P67

WSF ID No.: Ravenwood Well #1 - P1A WSF ID No.: Woodvalley Well #11 - P93

Water System No: NC0392373

Wake County

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at the following wells in the Bayleaf Master System: Barton Creek Bluffs Well #10 – P67, Ravenwood Well #1 – P1A, Woodvalley Well #11 – P93. The Bayleaf Master System/Barton Creek Bluffs/Ravenwood/Woodvalley water systems are comprised of 120 active wells and 109 points of entry (POE). The current number of customers served is 5,930 and the system is approved to serve 6,246 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #10 – P67, Well #1 – P1A, and Well #11 – P93.

UPDATED QUARTERLY STATUS REPORT

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg.		it Inorganic g Results
Well Name and No.	Approved	Pump Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Ravenwood Well #1 – P1A (samples collected March 24, 2015)	35	0	0.3	0.14

Page Three Barton Creek Bluffs Well #10 - P67 Ravenwood Well #1 - P1A Woodvalley Well #11 - P93 October 6, 2016

Woodvalley Well #11 – P93 (Samples collected December 10, 2015)	29	7.3	0.18	0.285
Woodvalley Well #11 – P93 Well Head (Samples collected September 22, 2016)	29	9.7	ND	0.151
Barton Creek Bluffs Well #10 – P67 (Samples collected June 2013)	15	9.4	0	0.2
Barton Creek Bluffs IOC Well #10 – P67 (Samples collected May 31, 2016	15	9.8	0	0.232
Barton Creek Bluffs Well Head Well #10 – P67 (Samples collected September 22, 2016)	15	9.8	1	0.102

Ravenwood Well #1, P1A

This well does not run on a regular basis and operates in back-up mode. Aqua will continue to sample at the entry point as required and will ensure that Well #1 will be ready for use if this well needs to be placed into service. Aqua is revising our Operator Sampling Procedure to ensure all wells are properly being exercised on a routine basis. In the event a back-up well is needed, the well will be ready for use if it needs to be placed into service.

Update - 10.6.16

Based on the meeting that Aqua staff had with you and Shawn Guyer on September 15, 2016, no further reports are required to be submitted to DEQ for Ravenwood Well #1, P1A.

Woodvalley Well #11, P93

The IOC results taken on December 10, 2015, showed elevated levels of manganese. Aqua will take field measurements from raw water in the second quarter of 2016 and depending on the results will pursue additional treatment, if warranted.

Update - 10.6.16

Updated samples were collected September 22, 2016, and the results are shown in the table above. Aqua will submit engineering plans and specifications for approval of a sequestering agent and plans to have this installed by December 30, 2016. Once the sequestering agent is installed, Aqua will evaluate its effectiveness by collecting monthly turbidity samples at the point of entry and a location in the distribution system.

Page Three Barton Creek Bluffs Well #10 - P67 Ravenwood Well #1 - P1A Woodvalley Well #11 - P93 October 6, 2016

Barton Creek Bluffs Well #10, P67

The IOC results taken in June 2013, showed elevated levels of manganese. In February 2016, Aqua began treating Well #10 with SeaQuest. Aqua will perform another IOC compliance sample in the second quarter of 2016 to determine the effectiveness of the treatment of SeaQuest and depending on the results will pursue additional treatment, if warranted. The flushing of the Barton Creek Bluffs water system will be completed by April 15, 2016.

Update - 10.6.16

Updated samples were collected September 22, 2016, and the results are shown in the table above. SeaQuest is being fed at Well #10. We are optimizing the chemical feed rate of the sequestering agent, and will continue to flush the system on an annual basis. Aqua has requested a meeting with you and Shawn Guyer to discuss alternative sampling, such as turbidity, rather than total/soluble iron and manganese.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



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October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration Cambridge Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0392387

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Cambridge Well #1, P01. The Cambridge water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 74 and the system is approved to serve 74 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Cambridge Well #1, P01	27	6.5	0.6	0.02
Updated Information (Samples collected March 10, 2016)	27	6.0	ND	0.017
Updated Information (Samples collected from the well head on September 22, 2016)	27	6.4	ND	ND

Page Two Cambridge Subdivision Well #1, P01 October 6, 2016

Aqua is unsure why the sample collected on April 1, 2013, showed elevated results for iron. Aqua collected additional samples on September 22, 2016, which shows very little to no presence of iron and manganese. These results are shown in the table above.

Flushing

Aqua performed a system wide flushing of the Cambridge water system May 9 through May 13, 2016.

Customer Complaints

For the last 12 months beginning in April of 2015 through April of 2016, Aqua has not received any complaints from the customers at Cambridge.

Based on the updated information provided above Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



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October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration Cambridge Subdivision, Wake County

WSF ID No.: Well #2, P02 Water System No: NC0392387

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Cambridge Well #2, P02. The Cambridge water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 74 and the system is approved to serve 74 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #2, P02.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Cambridge Well #2, P02 (Samples collected April 1, 2013)	27	6.5	0.07	2.24
Updated Information (Samples collected March 10, 2016)	27	6.0	0	0.017
Updated Information (Samples collected September 22, 2016	27	6.1	ND	.048

Page Two Cambridge Subdivision Well #2, P02 October 6, 2016

Aqua collected an IOC compliance sample on March 10, 2016, and the results are shown in the table above. To confirm this result, Aqua collected well head samples for iron and manganese on September 22, 2016, and the results are shown in the table above.

Flushing

Aqua performed system-wide flushing between May 9 and May 13, 2016.

Customer Complaints

From January 2016 through June 2016, Aqua received no complaints from the customers at Cambridge.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



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October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re.

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration Camelot Subdivision, Wake County

WSF ID No.: Well #4, P04 Water System No: NC0392111

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Camelot Well #4, P04. The Camelot water system is comprised of four active wells and four points of entry (POE). The current number of customers served is 243 and the system is approved to serve 243 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #4, P04.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg.	Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Pump Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Camelot Well #4, P04 (Samples collected April 17, 2013)	N/A	8.4	0.07	0.128
Updated Information (Samples collected April 13, 2016)	N/A	10.8	0.0802	0.0947

Page Two Camelot Well #4, P04 October 6, 2016

Aqua collected a new IOC Compliance sample on April 13, 2016, and the results are shown in the table above.

Aqua received approval June 13, 2016, to begin feeding SeaQuest at all four wells in the Camelot system and began feeding SeaQuest at Camelot Well #4 on July 27, 2016.

Aqua is currently in the first phase of replacing all the distribution mains in Camelot and expects to complete the final phase of the project in mid-2017.

Customer Complaints

From June 2015 through June 2016, there have been two customer complaints of discolored water received from the customers at Camelot and no customer complaints received in the past three months.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration,

Cotesworth Down/Kensington Manor Well # 1, P04 Wake County, Water System No: NC0392125

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 8, 2016, regarding elevated concentrations of iron (Fe) and manganese (Mn) at Cotesworth Down/Kensington Manor Well #1, P04. The Cotesworth Down/Kensington Manor master system is comprised of four wells and four points of entry (POE). The current number of customers served is 192 and the system is approved to serve 192 connections. The table below outlines the run time and the latest iron and manganese concentration collected as part of the ongoing Inorganic Chemical Analyses (IOC) at Well #1, P04.

UPDATED QUARTERLYSTATUSREPORT

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg.Pump	Most Recent Sampling	_
·		Runtime	Fe	Mn
	Approved	(hrs/day)	(mg/L)	(mg!L)
Cotesworth Down/				
Kensington Manor Well				
#1 (P04)				
(Sample collected	33	5.0	2.0	0
February 4, 2014				
Updated Information				
(Sample collected March	33	6.2	.02	.012
1, 2016)				
Updated Information				
(Sample collected	33	9.60	.0	.0
September 20, 2016)				

Currently there is no iron and manganese treatment at Cotesworth Down/Kensington Manor Well #1 (P04). On March 1, 2016, Aqua took a field measurement from the raw water and the results are shown in the table above.

Currently there is no iron and manganese treatment at Cotesworth Down/Kensington Manor Well #1 (P04). On March 1, 2016, Aqua took a field measurement from the raw water and the results are shown in the table above.

Page Two Mr. W. Allen Hardy October 6, 2016

Aqua postponed the cleaning and inspection of the 5,400 gallon hydropneumatic tank at Well #1 after the well head samples revealed no problems. The next IOC Compliance Sample is due in February 2017.

Updated samples were collected September 20, 2016, and the results are shown in the table above.

Flushing

The Cotesworth Downs distribution system was most recently flushed in April 2016.

Customer Complaints

From June 16, 2015 through June 16, 2016, Aqua received 13 water quality complaints with the last complaint being on March 31, 2016. Since the last update provided in June, Aqua has received three water quality complaints.

Based on the information provided above, Aqua requests that this Notice of Deficiency be rescinded as well as the requirement to submit further quarterly status reports.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration

Fairview Wooded Acres Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0392129

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Fairview Wooded Acres Well #1, P01. The Fairview Wooded Acres water system is comprised of four active wells and three points of entry (POE). The current number of customers served is 119 and the system is approved to serve 134 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

UPDATED QUARTERLY STATUS REPORT

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Fairview Well #1, P01 (Samples collected March 18, 2015)	12	0	.880	ND
Updated Information (IOC samples scheduled to be taken March 2018)	12	0		

Aqua collected samples on March 18, 2015, Well #1, P01, which showed elevated results for iron. Well #1 does not run on a regular basis because of reduced system demand and operates in a back-up mode. This well is expected to be abandoned when the Interstate 540 toll road construction begins in this area.

Page Two Fairview Wooded Acres Subdivision Well #1, P01 October 6, 2016

Flushing

Aqua performed system wide flushing between June 13 and June 17, 2016.

Customer Complaints

From June 2015 through June 2016, Aqua received three complaints from the customers at Fairview Wooded Acres.

Follow up Actions

Well renovations are scheduled to be complete by the end of the fourth quarter of 2016. This will involve having the well drilled out to the well's original depth in order to remove the sediment that has filled in the bottom of the well. After well renovation is complete, Aqua will test and add additional treatment, if needed.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration Fox Run Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0332116

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) at Fox Run Well #1, P01. The Fox Run water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 111 and the system is approved to serve 141 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Sampling	
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Fox Run Well #1, P01 (Sample collected April	26.5	0	2.4	0.0
17, 2014) Updated Information				
(Sample collected March 1, 2016)	26.5	0	0.012	0.0011
Updated Information (Samples collected	26.5	2.4	0.1	0.0042
September 21, 2016)	20.0			0.0012

Page Two Fox Run Subdivision Well #1, P01 October 6, 2016

Aqua collected an IOC sample on March 1, 2016, and the results are shown in the table above. Updated samples were collected on September 21, 2016, and the results are shown in the table above.

Flushing

The Fox Run water system was last flushed the week of July 11, 2016.

Customer Complaints

From June 2015 through June 2016, Aqua received no complaints from the customers at Fox Run.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

www. V July

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration Foxmoor Subdivision, Wake County

WSF ID No.: Well #2, P02 Water System No: NC4392163

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Foxmoor Well #2, P02. The Foxmoor water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 78 and the system is approved to serve 79 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #2, P02.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Sampling	U
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Foxmoor Well #2, P02 – (Samples collected January 14, 2015)	12	.6	0.5	2.3
Updated Information – (Samples collected March 2, 2016)	12	.5	0.15	0.002
Updated Information (Samples collected September 21,2016	12	.8	0.23	0.008

Page Two Foxmoor Subdivision Well #2, P02 October 6, 2016

Aqua collected samples on March 2, 2016, and the results are shown in the table above. To confirm this result, Aqua collected raw water samples on September 21, 2016, and the results are shown in the table above.

Flushing

The water system was last flushed the week of June 27, 2016.

Customer Complaints

From June 2015 through June 2016, Aqua did not receive any complaints from the customers at Foxmoor.

Based on the updated information provided above, including the limited use of this well's supply in coordination with the remaining active wells serving this system, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency

Iron and Manganese Concentration

Glendale Master System Subdivision, Wake County

WSF ID No.: Well # 1, TPl Water System No: NC0392293

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Glendale Master System Well #1, TPI. The Glendale Master System is comprised of six active wells and six points of entry (POE). The current number of customers served is 250 and the system is approved to serve 253 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, TPI.

TABLE 1: Run Time and IOC Analysis

Well Name and No.	Capacity (gpm) Approved	12-Month Avg. Pump Runtime (hrs/day)		nt Inorganic ng Résults Mn (me/L)
Glendale Master Hickory Creek Well # 1, (TP#l) (Samples collected October 2014)	45	0	1.3	0.175
Glendale Master Hickory Creek Well #1 (TP#1) (Samples collected October 6, 2016)	45	4.36	0.72	0.085

Page Two Glendale Master System Well #1, TP#1 October 6, 2016

Glendale Well #1 exceeded the secondary maximum contaminant level (sMCL) for iron and manganese. Samples were collected at the entry point for Hickory Creek Well #1 on October 6, 2016, and the results are shown in the table above.

Over the last 12 months, Aqua has received four calls for cloudy, milky water but has not received any calls regarding discolored water due to iron or manganese.

Aqua will seek engineering approval for a sequestering agent at this well by December 1, 2016. Upon receipt of approval, the sequestering agent will be installed and Aqua will collect monthly turbidity samples from the raw water and point of entry to determine its effectiveness. Aqua will then re-evaluate the need for further treatment after six months.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



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October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration Jamison Subdivision, Wake County

WSF ID No.: Well #6, P03 Water System No: NC4392188

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Jamison Park Well #6, P03. The Jamison Park water system is comprised of four active wells and four points of entry (POE). The current number of customers served is 209 and the system is approved to serve 220 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #6, P03.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Sampling	_
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Jamison Park Well #6, P03 (Samples collected February 11,2014)	150	4.9	0.6	0.02
Jamison Park Well #6, P03 (Samples collected March 8, 2016)	150	5.5	0.28	0.000
Updated Information (Samples collected September 22, 2016)	150	4.4	0.13	0.055

Page Two Jamison Park Subdivision Well #6, P03 October 6, 2016

Updated field samples were collected on September 22, 2016, and the results are shown in the table above.

Flushing

Aqua will perform a system-wide flushing of the Jamison Park water system by December 2016.

Customer Complaints

From June 2015 through June 2016, Aqua has received five complaints from the customers at Jamison Park.

Based on the updated information provided above, including the limited use of this well's supply in coordination with the remaining active wells serving this system, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



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October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration

Lake Ridge Aero Park Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0332135

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Manganese (MN) at Lake Ridge Aero Park Well #1, P01. The Lake Ridge Aero Park water system is comprised of one active well and one point of entry (POE). The current number of customers served is 46 and the system is approved to serve 49 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Sampling	
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Lake Ridge Aero Park Well #1, P01 (Samples collected February 21, 2013)	50	2.4	0	0.062
Updated Information (Samples collected February 15, 2016)	50	2.7	0	0.0755

Page Two Lake Ridge Aero Park Subdivision Well #1, P01 October 6, 2016

In - Bech

Updated Information				
(Samples collected	50	2.75	0.041	0.0029
September 21, 2016)				

Aqua collected additional IOC samples on September 21, 2016, and the results are shown in the table above.

Flushing

The Lake Ridge Aero Park water system was last flushed the week of August 15, 2016.

Customer Complaints

From June 2015 through June 2016, Aqua received two discolored water complaints.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Manganese Concentration

Lakewood Estates Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0392294

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of and Manganese (Mn) at Lakewood Well #1, P01, The Lakewood Estates water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 37 and the system is approved to serve 50 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

TABLE 1: Run Time and IOC Analysis

Capacity (gpm)	12-Month Avg. Pump	Most Recent Inorganic Sampling Results	
Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
N/A	2.8	0	0.13
N/À	4.5	0	0.01
	(gpm) Approved N/A	(gpm) Avg. Pump Runtime (hrs/day) N/A 2.8	(gpm) Avg. Pump Runtime Approved (hrs/day) (mg/L) N/A 2.8 0

Page Two Lakewood Estates Subdivision Well #1, P01 October 6, 2016

Aqua collected a field test sample on March 8, 2016, and the results are shown in the table above.

Treatment

In September 2016, Aqua received approval for the addition of a sequestering agent and will continue to optimize this form of treatment for the purpose of sequestering iron and manganese.

Flushing

Aqua performed a system-wide flushing of the Lakewood Estates water system between December 7, 2015 and December 11, 2015.

Customer Complaints

From June 2015 through June 2016, Aqua received 12 complaints from the customers at Lakewood Estates. However, Aqua has not received any complaints for the last three months.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Update

Iron and Manganese Concentration

Lynnbank Estates Subdivision, Vance County

WSF ID No.: Well #1, P02 Water System No: NC0291121

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Lynnbank Estates Well #1, P02. The Lynnbank Estates water system is comprised of one active well and one point of entry (POE). The current number of customers served is 47 and the system is approved to serve 63 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P02.

UPDATED QUARTERLY STATUS REPORT

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm) 12-Month Avg.		Most R Inorganic Resi	Sampling
Well Name and No.	App.	Pump Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Lynnbank Well #1, P02 (Samples collected February 27, 2013)	60	2.2	.06	.109
Updated Information (Samples collected February 11, 2016)	60	3.16	0	0.0196
Updated Information (Samples collected September 22, 2016)	60	3.6	0.12	.016

Page Two Lynnbank Estates Well #1, P02 October 6, 2016

Aqua collected IOC samples on February 11, 2016 and the results are shown in the table above. To confirm these results, Aqua collected another set of samples on September 22, 2016. The results are shown in the table above and indicate that concentrations for iron and manganese are below the secondary maximum contaminant levels.

Customer Complaints

From June 16, 2015, through June 16, 2016, Aqua has received no water quality complaints from the customers in Lynnbank Estates.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section Raleigh Regional Office, NCDEQ 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency

Iron and Manganese Concentration

Red Mountain Subdivision, Durham County

WSF ID No.: Well #2, P02 Water System No: NC0332136

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Red Mountain Well #2, P02. The Red Mountain water system is comprised of 3 active well and 3 points of entry (POE). The current number of customers served is 64 and the system is approved to serve 117 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #3, P03.

Well Name and No.	Capacity (gpm) Approved	12-Month Avg. Pump Runtime (hrs/day)		Recent Sampling Mn (mg/L)
Red Mountain, Well #2 P02	22	1.9	0	0.077
Red Mountain Well #2 P02 (Samples collected March 10, 2016	22	2.11	0.022	0.0012
Red Mountain, Well #2, P02 (Samples collected September 21, 2016)	22	2.14	.038	.0019

Page Two Red Mountain Subdivision, Well #2, P02 October 6, 2016

Updated samples were collected September 21, 2016 and the results are shown in the table above.

System Flushing

The Red Mountain water system was most recently flushed in July 2016 and will be flushed on a biannual basis.

Discolored Water Complaints

Aqua has not received any customer complaints for the last 12 months.

Corrective Actions

Analysis of the iron and manganese levels reveals the well has some iron and an elevated concentration of manganese at Well #2. In an effort to ensure that the drinking water was not discolored due to the presence of the minerals, Aqua switched from OP37 to feeding SeaQuest in October 2015.

Based on the most recent sample results collected from Well #2, Aqua requests that future quarterly status reports for this entry point be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O; 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration

Ridgebrook Bluffs/Westbury Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No.: NC4392101

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Ridgebrook Bluffs/Westbury Well #1, P01. The Ridgebrook Bluffs/Westbury water system is comprised of three active wells and three points of entry (POE). The current number of customers served is 92 and the system is approved to serve 108 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

TABLE 1: Run Time and IOC Analysis

Well Name and No.	Capacity (gpm) Approved	12-Month Avg. Pump Runtime (hrs/day)	Most Recent Sampling Fe (mg/L)	
Ridgebrook Bluffs/ Westbury Well #1, P01 (Samples collected August 8, 2013)	30	6.2	0	0.9
Updated Information (Samples collected March 8, 2016)	30	4.4	0	0.03

Page Two Ridgebrook Bluffs/Westbury Well #1, P01 October 6, 2016

Field samples were collected on March 8, 2016, and the results are shown in the table above.

Cleaning and inspection of the 10,000 gallon storage tank at Well #1 has been rescheduled to the fourth quarter of 2016.

<u>Customer Complaints</u>

From June 15, 2015 through June 15, 2016, Aqua received two water quality complaints from customers in Ridgebrook Bluffs/Westbury being December 2015 and May 2016.

Aqua is managing the run times at this well and in the past three months has reduced the run time to 1.5 hours per day.

Treatment

On September 15, 2015, Aqua started feeding SeaQuest.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AquaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration

Royal Senter Ridge/Whitehart Subdivision, Wake County

WSF ID No.: Well #1, P04 Water System No: NC4392140

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Royal Senter Ridge/Whitehart Well #1, P04. The Royal Senter Ridge/Whitehart water system is comprised of four active wells and three points of entry (POE). The current number of customers served is 249 and the system is approved to serve 252 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P04.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm) 12-Month Avg.		Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Pump Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Royal Senter Ridge / Whitehart Well #1, P04 (Samples collected February 6, 2014)	8	0.6	3.0	0.075
Updated Information (Samples collected March 9, 2016)	8	0.0	3.3	0.069

Page Two Royal Senter Ridge/Whitehart Well #1, P04 October 6, 2016

Update Information				
(Samples collected	8	0	1.39	0.159
September 21, 2016)				

Update field samples were collected on September 21, 2016, and the results are shown in the table above. Well #1 does not run on a regular basis because of system demand and operates in a back-up mode.

Flushing

Aqua performed a system-wide flushing of Royal Senter Ridge/Whitehart during the week of June 20, 2015.

Customer Complaints

From June 2015 through June 15, 2016, Aqua received eight water quality complaints from the customers at Royal Senter Ridge/Whitehart.

Based on the updated information provided above, including the limited use of this well's supply in coordination with the remaining active wells serving this system, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re:

Notice of Deficiency - Quarterly Status Report

Iron and Manganese Concentration

Weekend Retreat/Southern Oaks Subdivision, Wake County

WSF ID No.: Well #1, P01 Water System No: NC0392387

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (Mn) at Weekend Retreat/Southern Oaks Well #1, P01. The Weekend Retreat/Southern Oaks water system is comprised of four active wells and three points of entry (POE). The current number of customers served is 210 and the system is approved to serve 242 connections. The table below outlines the run time and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #1, P01.

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg.	Most Recent Inorganic Sampling Results	
Well Name and No.	Approved	Pump Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Weekend Retreat / Southern Oaks Well #1, P01 (Samples collected November 11, 2014)	70	0.2	0.675	0
Updated information (Compliance IOC sample collected May 4, 2016)	70	2.9	0.163	0

Page Two Weekend Retreat/Southern Oaks/Dayton Woods Well #1, P01 October 6, 2016

Updated Information (Samples collected September 20, 2016	70	Avgerage run time over past three months is 3.05 hours	0.06	0
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Aqua has made operational changes that have enabled this well to run on a regular basis.

Customer Complaints

From June 2015 through June 2016, Aqua received two complaints from the customers at Weekend Retreat.

Based on the updated information provided above, Aqua requests that the requirement to submit further quarterly status reports be discontinued.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President



O: 919.653.5770 • F: 919.460.1788 • SVBecker@AguaAmerica.com

October 6, 2016

Mr. W. Allen Hardy Engineering Supervisor Public Water Supply Section 1628 Mail Service Center Raleigh, NC 27699-1628

Re

Notice of Deficiency – Quarterly Status Report

Iron and Manganese Concentration

Woods of Ashbury Subdivision, Wake County

WSF ID No.: Well #2, P02 Water System No: NC0392388

Dear Mr. Hardy:

Aqua North Carolina, Inc. (Aqua) received the above-referenced letter dated February 24, 2016, regarding elevated concentrations of Iron (Fe) and Manganese (MN) at Woods of Ashbury Well #2, P02. The Woods of Ashbury water system is comprised of two active wells and two points of entry (POE). The current number of customers served is 56 and the system is approved to serve 56 connections. The table below-outlines the run-time-and the latest iron and manganese concentrations collected as part of the ongoing Inorganic Chemical Analyses (IOC) samples collected at Well #2, P02.

UPDATED QUARTERLY STATUS REPORT

TABLE 1: Run Time and IOC Analysis

	Capacity (gpm)	12-Month Avg. Pump	Most Recent Sampling	_
Well Name and No.	Approved	Runtime (hrs/day)	Fe (mg/L)	Mn (mg/L)
Woods of Ashbury Well #2, P02 (Samples collected February 21, 2013)	28	0	2.0	0.06
Updated Information (Samples collected March 16, 2016)	28	1.4	0.512	0.0435

Page Two Woods of Ashbury Subdivision Well #2, P02 October 6, 2016

Updated Information				
(Samples collected	28	1.6	.005	0.008
September 21, 2016				

Aqua collected an IOC compliance sample on March 16, 2016, and the results are shown in the table above. The well pump and motor were replaced on March 9, 2016.

Also Well #2 was cleaned with dry ice and super chlorinated prior to the IOC sample collection. The well is currently in operation.

Updated samples were collected on September 21, 2016, and the results are shown in the table above.

Flushing

The Woods of Ashbury water system was last flushed in May 23, 2016.

Customer Complaints

From April 2015 through April 2016 Aqua received no complaints from the customers at Woods of Ashbury.

Treatment

Based on the updated results above, we do not believe that additional treatment is needed at this time.

Aqua is committed to providing water to its customers that meets their expectations at a reasonable cost. If you have any questions or comments, please contact Rob Bonne at (919) 653-6982.

Sincerely,

Shannon V. Becker

President