



VEOLIA WATER NEW YORK INC.
PFAS PROGRESS REPORT

PUTNAM COUNTY - CHATEAU RIDGE

4TH QUARTER OF 2023
REVISION A - JANUARY 31, 2024



1. OVERVIEW

PFOA and PFOS are chemical substances that have been used for decades to manufacture firefighting foam and many common household and consumer products the public uses frequently, including non-stick cookware, fast food packaging, adhesives, paints, shampoo and cosmetics.

Since 2016, states and water providers have followed the Environmental Protection Agency (EPA) health advisory level of 70 parts per trillion (ppt) for PFOA and PFOS in drinking water. Multiple laboratory tests confirmed that Veolia Water New York Inc.'s ("Veolia" or the "Company") Chateau Ridge water system in Putnam County, New York (Public Water Supply ID# NY3905685) tested well below the 2016 federal advisory levels for these substances. In June 2022, the EPA issued new health advisory levels for PFOA and PFOS which are set at very low levels: 0.004 and 0.02 ppt, respectively, which is below the current detection and reporting limits. Health advisory levels are not binding regulations and are intended to provide technical information that federal and state agencies and local officials can utilize in considering monitoring, treatment, and policy issues.

In late August 2020, the State of New York set a new standard of 10 ppt for PFOA and PFOS in drinking water. In anticipation that the New York State Department of Health would set a new standard for PFOA and PFOS, as it did in 2020, Veolia engineers and water quality experts began investigating and designing treatment solutions in 2019.

Veolia has submitted the applications for approval of new treatment facilities to the New York State Department of Health in Q3 2021 and is working closely with the New York State Department of Health (NYSDOH) and the Putnam County Health Department (PCHD) to achieve compliance by installing the advanced treatment.

Veolia received a deferral from the New York State Department of Health on January 7, 2021 for the implementation of treatment, recognizing the design, testing, permitting, construction, and other activities will take time to complete. As part of the deferral process, the Company submitted a detailed action plan that will ensure that the water system will meet the new State standard and has produced this progress report as a further requirement of the deferral process. In Q3 2022, Veolia submitted a request and received the approval on August 23, 2022 for an additional deferral for the project due to delays in receiving the required approvals to begin the construction of the new treatment facilities. The deferral extension approval granted by the NYSDOH, extended the deferral to June 25, 2023. Correspondence in Q2 2023 from the NYSDOH clarified that the system is required to demonstrate Q3 sampling compliance and receive DOH approval to place the system into service in Q3 2023.

Following building permit receipt in Q4 2022 Veolia proceeded, at risk pending NYSDOH approval, with the start of construction on items including site clearing, yard piping, etc. As of the end of Q2 2023, the GAC media has been installed, backwashed and forward flushed, with the final samples collected on June 27, 2023. Veolia received the system startup process sample results on July 24, 2023, submitted the construction completion report to the DOH for approval on July 28th, and received approval from the DOH on August 16, 2023. The system was placed in service on August 22, 2023. Please note the Q3 sample results depicted in the table below were collected prior to placing the system into service. Q4 quarterly sample results will represent the results with PFAS treatment in service.

Q4 2023 - Revision A Update: Multiple laboratory QA/QC and data reporting errors for the Q4 compliance sample results as of the January 10, 2024 (original report submission), led to the inability to post the results in the original report or the creation of a supplemental samples results report. The laboratory rectified the issues and sent the information to Veolia on 01/31/2024. These Q4 2023 Revision A documents include the sample results depicted in Table 1-1 and the supplemental sample results report.

1.1. Test Results

The results of compliance and confirmation sampling are summarized in Table 1-1 for the sites with analytical results confirming a current or previous MCL exceedance.

Table 1-1: Sample Test Results

Well Site	Sample Date***	PFOS (ppt)	PFOA (ppt)
Chateau Well 3	10-7-20	7	12
Chateau Well 1	10-8-20	12	14
Chateau Well 2	10-8-20	6.9	8.2
Chateau Well 1	10-26-20	15	14
Chateau Well 3	10-29-20	4.9	7.6
Chateau Well 1	1-28-21	9.6	11
Chateau Well 2	1-28-21	6.4	7.1
Chateau Well 3	*	*	*
Chateau Well 1	4-19-21	9.9	12
Chateau Well 2	4-19-21	7.2	7.7
Chateau Well 3	4-21-21	10	12
Chateau Well 1	7-21-21	9.8	11
Chateau Well 2	7-21-21	6.7	7.6
Chateau Well 3	*	*	*
Chateau Well 1	10-20-21	11	13
Chateau Well 2	10-20-21	8.2	8.3
Chateau Well 3	*	*	*
Chateau Well 1	1-20-22	11	11
Chateau Well 2	1-20-22	9.7	9.6
Chateau Well 3	*	*	*
Chateau Well 1	4-21-22	10	12
Chateau Well 2	4-21-22	9.7	11
Chateau Well 2**	6-7-22	8.4	8.8
Chateau Well 3	*	*	*
Chateau Well 1	9-14-22	14	13

Well Site	Sample Date***	PFOS (ppt)	PFOA (ppt)
Chateau Well 2	9-14-22	9	8.4
Chateau Well 3	*	*	*
Chateau Well 1	10/24/22	8.5	8.3
Chateau Well 2	11/22/22	8.2	7.7
Chateau Well 3	*	*	*
Chateau Well 3	*	*	*
Chateau Well 1	1/25/23	12	12
Chateau Well 2	1/25/23	7.1	6.9
Chateau Well 1	04/25/2023	Lab Error (Resample Needed)	
Chateau Well 1†	06/01/2023	11	12
Chateau Well 2	04/25/2023	Lab Error (Resample Needed)	
Chateau Well 2†	06/01/2023	8.2	7.8
Chateau Well 3	*	*	*
Chateau Well POE††	8/31/2023	ND	ND
Chateau Well POE††††	10/20/2023	ND	ND

Notes:

Red font indicates concentrations greater than the new New York State Drinking Water Standard of 10 parts per trillion (ppt) and require treatment.

Gray shading indicates sample results from previous periods

*Chateau Well 3 was out of service in Q1-21, Q3-21, Q4-21, Q1-22 to Q4-22, and Q1-23-Q3-23

** Chateau Well 2 was resampled in Q2 2022 following the April 21, 2022 sample results exceeding 10ppt for the first time

*** Analytical results depicted from 9/2020 through 6/2022 are EPA Method 537. Analytical results from 7/2022 to date are EPA Method 533. EPA Method 537.1 data from 7/2022 to date is available in the Supplemental Report.

Beginning Q2 2023, Veolia Water New York made the following changes to its PFAS sampling protocol. Method 533 is used to analyze all 25 unique PFAS compounds covered by this Method as indicated on the US EPA, Office of Water, table number MS-140 dated December 2019. Method 537.1 is used to analyze only the 4 additional PFAS compounds not addressed by Method 533 as presented in the same above reference EPA table. Supplemental reports will also reflect this change beginning Q2 2023.

† Multiple Q2 2023 Samples required resampling due to analytical laboratory error. Resample results are pending as of the submission of this Q2 report.

†† Chateau System placed into service 8/22/2023. Data reflects POE (after treatment only).

Additional data on Raw Combine (combined wells before treatment and Lead Vessel Effluent (between lead and lead vessels of the PFAS treatment) are presented in the supplemental report.

††† **Q4 2023 - Revision A Update: Multiple laboratory QA/QC and data reporting errors for the Q4 compliance sample results as of the January 10, 2024 (original report submission), led**

to the inability to post the results in the original report or the creation of a supplemental samples results report. The laboratory rectified the issues and sent the information to Veolia on 01/31/2024. These Q4 2023 Revision A documents include the sample results depicted in Table 1-1 and the supplemental sample results report.

1.2. Progress Update

Veolia continues to identify treatment requirements, including design and construction needs for PFOA/PFOS treatment facilities and procurement of Granular Activated Carbon (GAC) vessels and media, which is identified as the Best Available Technology for the treatment of PFOA/PFOS. Veolia’s proactive efforts, including bench testing studies for treatment alternatives, design for treatment equipment and facilities, and bidding for long-lead time equipment, began in advance of New York State’s adoption of the new state standard for PFOA and PFAS. Veolia received the system startup process sample results on July 24, 2023, submitted the construction completion report to the DOH for approval on July 28th, and received approval from the DOH on August 16, 2023. The system was placed in service on August 22, 2023. The Chateau PFAS treatment was in operation during Q4 2023.

1.3. Action Plan Schedule – Key Milestones

Veolia is moving as quickly as possible to complete the implementation of treatment solutions and in an effort to complete the work on or around 24 months. However, circumstances beyond VWN’s control, including unavailability of local permitting resources and unprecedented supply chain constraints associated with COVID-19 are expected to delay ‘Treatment Facilities in Service’ by up to eighteen (18) months. The original estimated completion dates and actual completion dates are summarized in Table 1-2 for the impacted site.

Table 1-2: Project Schedule

Milestone	Estimated Completion Date	Actual Completion Date
Treatment Equipment Bidding	4 th Quarter 2020	4 th Quarter 2020
Engineering, Procurement, and Construction Award	1 st Quarter 2021	1 st Quarter 2021
Complete Design / Submit for Permitting Review	3 rd Quarter 2021	3 rd Quarter 2021
Commence Project Construction / Implementation	1 st Quarter 2022	4 th Quarter 2022
Treatment Facilities In Service	3 rd Quarter 2022	3rd Quarter 2023

*Mobilization for construction start is expected to be delayed by up to twelve months due to unavailability of local permitting resources

**Expected to be delayed by up to eighteen months or more due to unavailability of local permitting resources and supply chain constraints

1.4. Potential Schedule Impacts

The installation of water quality treatment must be planned and constructed carefully to ensure effectiveness. There are several steps that must be taken prior to implementation of treatment in a drinking water system, including:

- Bench testing and studies
- Issuance of a request for proposals for design services, permitting services, equipment fabrication, and construction
- Contract award and execution for above services
- Detailed design
- Permitting
- Construction
- Start-up and commissioning

Similarly, several industry resources, many of whom are independent and outside of a water utility's management or control (as listed below), are needed to fully execute the treatment plan, which could result in unanticipated delays:

- Availability of laboratories to manage the volume and reporting of water quality data
- Availability of consulting services needed:
 - to conduct bench and/or pilot scale studies to develop treatment design criteria
 - to detail treatment design and preparation of permit applications
 - to develop construction bid documents
 - to procure construction contracts,
- Availability of construction services needed install and commission treatment facilities
- Availability of appropriate commercial treatment equipment and media
- Availability of Health Department and local planning board for permitting and review processes

Permits and/or approvals are anticipated to be required from the following agencies:

- Putnam County Department of Health
- New York State Department of Health
- New York State Department of Environmental Conservation
- Town Planning Board and Building Department.
- Town Board, Architectural Commission and/or Zoning Board of Appeals may also be required, depending on whether the design requires a variance

During the detailed design of the treatment facilities, permitting constraints outside of Veolia's control are expected to result in unanticipated delays. The permitting constraints include unavailability of local planning boards for permitting and review processes, and various site constraints, including zoning and environmental conflicts. Delays due to local Planning Board resources are estimated at up to six months or more.

Supply chain constraints associated with COVID-19 have caused unanticipated delays in the fabrication and delivery of materials and equipment, ranging from stainless steel vessels to building materials to freight carriers. Delays due to materials and equipment resources are currently estimated at up to three months. Veolia's proactive efforts to release major materials for fabrication in parallel with permitting reviews and to source alternate vendors are expected to mitigate schedule delays by three months or more.

In addition, many large and medium-sized public community water systems and non-community water systems will need to comply with the new regulations at approximately the same time, potentially creating bottlenecks in the above areas and resulting in schedule impacts.

Despite Veolia's affirmative efforts to meet all existing project milestones, the hardships beyond Veolia's control (noted above) are predicted to cause up to eighteen (18) months of delay, which required an additional deferral from the State as of Q3 2022. This additional deferral was approved on August 23, 2022.

1.5. Implementation of Interim Measures

There are no interim measures that can be taken at this time while maintaining adequate water supply.

1.6. Emergency Conditions

There are no interim measures that can be taken at this time while maintaining adequate water supply.