



SUEZ WATER NEW YORK INC. PFAS PROGRESS REPORT

4th QUARTER OF 2021



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.

For years, states and water providers have followed the Environmental Protection Agency (EPA) health advisory limit of 70 parts per trillion (ppt) for PFOA and PFOS in drinking water. Multiple laboratory tests confirm that SUEZ Water New York Inc.'s ("SUEZ" or the "Company") water system in Rockland County, New York (Public Water Supply ID#NY4303673) has tested well below the federal advisory levels for these substances.

While concentrations of PFOA and PFOS in our New York water supply have not changed, in late August 2020, the State of New York set a new standard of 10 ppt for these substances in drinking water.

In accordance with the new requirements, SUEZ took additional samples from its reservoir and well water sources in October. Most sites tested below both the federal health limit of 70 ppt and the new state standard of 10 ppt. Assuming that these levels remain under the State standard, these sites will require no additional treatment. In addition, SUEZ will add treatment to certain sites that are now below the State standard, but may be at risk of exceeding the standard in the future.

Those sites that tested above the new state standard remain well below the federal level of 70 ppt, but will require treatment to meet the new State requirements.

SUEZ is working closely with the New York State Department of Health and the Rockland County Health Department to achieve compliance by installing advanced treatment.

In anticipation that the New York State Department of Health would set a new standard for PFOA and PFOS, as it has done in 2020, SUEZ engineers and water quality experts began investigating and designing treatment solutions in 2019.

SUEZ received a deferral from the New York State Department of Health on January 8, 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 standard and has produced this progress report as a further requirement of the deferral process.

1.1. Test Results

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

Table 1-1: Sample Test Results

Well Site	Sample Date	PFOS (ppt)	PFOA (ppt)
SW 70	10/2/2020	4.7	11
SW 70	10/14/2020	5.4	11
SW 82	10/1/2020	5.3	12
SW 82	10/22/2020	5.5	12
SW 31A	10/1/2020	3.6	19
SW 31A	10/15/2020	3.8	19
SW 31A	10/22/2020	9.5	14
SW 38	10/2/2020	5.2	11
SW 38	10/15/2020	5.4	11
SW 17	10/2/2020	9	14
SW 1A	10/2/2020	7.2	14
SW 3	10/2/2020	6.4	12
SW 17	10/7/2020	9	15
SW 1A	10/7/2020	7.4	14
SW 3	10/7/2020	5.5	10
SW 20*	10/1/2020*	47*	11*
SW 16	10/1/2020	8.6	16
SW 16	10/14/2020	11	16
SW 20*	10/22/2020*	47*	10*
SW 56	10/2/2020	4.2	11
SW 56	10/14/2020	4.2	10
SW 70	1/13/2021	ND	3.6
SW 82	1/12/2021	5.2	12
SW 31A**	Well out of service in Q1-2021		
SW 38	1/13/2021	3.6	5.9
SW 17	1/13/2021	9.5	13
SW 1A	1/13/2021	7.4	13
SW 3	1/13/2021	6.1	10
SW 20*	1/12/2021	32	8.9
SW 16	1/12/2021	7.3	17
SW 56	1/13/2021	4.6	11
SW 15	1/13/2021	2	12
SW 19	1/12/2021	5.1	13
SW 23	1/12/2021	6.4	11
SW 30	1/12/2021	3.2	11

SW 70***	Well out of service in Q2-2021		
SW 82	4/14/2021	5.8	12
SW 31A	5/20/2021	4.1	18
SW 38	4/14/2021	5.5	11
SW 17	4/13/2021	9	14
SW 1A	4/14/2021	7.6	13
SW 3	6/10/2021	7.6	12
SW 20*	4/14/2021	40	10
SW 16	4/14/2021	10	18
SW 56	4/14/2021	4.8	12
SW 15	4/14/2021	7.3	17
SW 15	4/28/2021	8.3	17
SW 19	4/13/2021	5.3	14
SW 23	4/13/2021	6.3	12
SW 30	4/13/2021	3.5	13
SW 4	4/14/2021	6.7	12
SW 4	5/13/2021	4.9	8.9
SW 38	7/7/2021	5.2	11
SW 19	7/7/2021	5.6	14
SW 17	7/8/2021	9.3	14
SW 1A	7/8/2021	7.5	13
SW 30	7/8/2021	2.9	11
SW 31A	7/8/2021	5.2	18
SW 56	7/8/2021	4.4	11
SW 82	7/8/2021	4.8	11
SW 15	7/8/2021	8.3	18
SW 16	7/8/2021	6.6	15
SW 20*	7/8/2021	3.3	11
SW 23	7/7/2021	5.9	10
SW 3	7/8/2021	5.9	10
SW 4	7/8/21	2.8	6.2
SW 70***	Well out of service in Q3-2021		
SW 15 ****	12/2/2021	ND	ND
SW 16	10/5/2021	6.8	14
SW 17	10/6/2021	8.8	13
SW 19	10/6/2021	4.6	14
SW 1A	10/6/2021	7.4	12
SW 20*	10/5/2021	32	11
SW 3	10/6/2021	6.2	9.7
SW 31A	10/6/2021	5.9	18
SW 31A****	12/7/2021	ND	ND
SW 38	10/6/2021	5.3	11

SW 4	11/4/2021	2.6	5.7
SW 56	10/6/2021	4.7	12
SW 82	10/5/2021	5.2	12
SW 30	10/6/2021	3.2	13
SW 6	10/6/2021	3.8	7.5
SW 23	10/6/2021	5.6	11
SW 70*** Out of Service Q4-21			

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

* SW 20 has been shut down for many years and will not be used until treatment is installed.

** SW 31A was out of service in Q1-21

*** SW70 was out of service in Q2-21, Q3-21 and Q4-21

**** SW 15 & SW 31A PFOA & PFOS results were non-detect after implementation of treatment upgrades in Q4-21

1.2. Progress Update

SUEZ successfully installed treatment upgrades for PFOA/PFOS removal at two well sites in Rockland County in the 4th quarter of 2021. One of the sites, Monsey 31A, included the highest compliance PFAS sample for an active well site (19 ppt). Both sites had existing media treatment (Calgon F300 granular activated carbon) that was designed to target different industrial/commercial organic compounds, or volatile organic carbons (VOC). SUEZ performed bench-scale studies of alternate treatment media types, and the selected media (Calgon F400 granular activated carbon) proved to be effective for PFOA/PFOS removal. SUEZ and its vendors performed the removal, transport, treatment, and disposal of the spent Calgon F300 granular activated carbon media for each site. Then, new treatment media (Calgon F400 granular activated carbon) was installed, including the proper backwashing, rinsing, flushing, and sampling to ensure water quality compliance. Subsequent PFAS and VOC sample results at the two locations were non-detect, confirming the effective remediation of the sites.

SUEZ continues to identify treatment requirements, including design and construction needs for PFOA/PFOS treatment facilities and procurement of Granular Activated Carbon (GAC) vessels, which is identified as the Best Available Technology for the treatment of PFOA/PFOS. SUEZ’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, and as early as 2019 for certain sites.

In the fourth quarter of 2021, SUEZ made progress on multiple fronts to meet the new standards for PFOA and PFOS in New York State.

SUEZ progressed completion of construction drawings and documents for the advanced treatment solutions in the fourth quarter of 2021. Additionally, SUEZ continued the permitting and coordination with State and Local agencies to finalize plans for the treatment facilities at 12 well sites (20 wells) in Rockland County. The plans include all structural, architectural, process piping, electrical, HVAC, and instrumentation and control components needed to provide a fully functional treatment system in compliance with state and local codes and regulations. SUEZ continues to proactively plan to add

treatment to certain sites that are now below the State standard, but may be at risk of exceeding the standard in the future.

Three sites received building permit approvals in the 4th quarter of 2021, and contractors mobilized to start early construction items at those sites.

Because the treatment equipment delivery times may extend beyond one year due to supply chain constraints and demand, SUEZ continued to coordinate with vendors to expedite equipment fabrication and coordinate delivery schedules with contractors. Equipment deliveries are expected to start in Q1-22 and continue into Q2-2022. The proactive design and fabrication efforts by SUEZ helped mitigate potential supply chain delays by three months or more.

1.3. Action Plan Schedule - Key Milestones

SUEZ 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 SWNY’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 twelve(12) months. The original estimated completion dates and actual completion dates are summarized in Table 1-2 for the impacted sites.

Table 1-2: Project Schedule

Milestone	Initial 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	2 nd Quarter 2021	2 nd Quarter 2021
Commence Project Construction / Implementation	4 th Quarter 2021	4 th Quarter 2021 (partial)*
Treatment Facilities In Service	3 rd Quarter 2022	-**

*Mobilization for construction start was completed for three sites in Q4-21. The remaining sites are expected to be delayed by up to six months or more due to unavailability of local permitting resources

**Expected to be delayed by up to twelve months 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 requests for proposal 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
- Approval from other utilities (I.e., Orange and Rockland)

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

- Rockland 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 SUEZ'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 or more. SUEZ'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.

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 SUEZ's affirmative efforts to meet all existing project milestones, the hardships beyond SUEZ's control (noted above) are predicted to cause up to twelve (12) months of delay, which may require additional deferral from the State.

1.5. Implementation of Interim Measures

Interim measures continue to be implemented to reduce the use of certain sources that have exceeded the new State standard for PFOA and PFOS. These measures will be taken as feasible under normal system operating conditions during average day demand periods only. Peak demand periods and/or changes in these conditions such as a main break, failure of another source or a large extended fire, or other conditions as deemed necessary by SUEZ, would entail utilization of any and all sources as needed to maintain adequate supply and pressure to our customers and communities we serve. SUEZ will continue to operate the water system to maintain proper flow, pressure, and to optimize water quality for our customers and the communities we serve at all times.

1.6. Emergency Conditions

No emergency conditions or changes in demand impacted the implementation of interim measures in the previous quarter.